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L.A. Indie Film Fest

Spielberg and Kaminski Explore *The Lost World*

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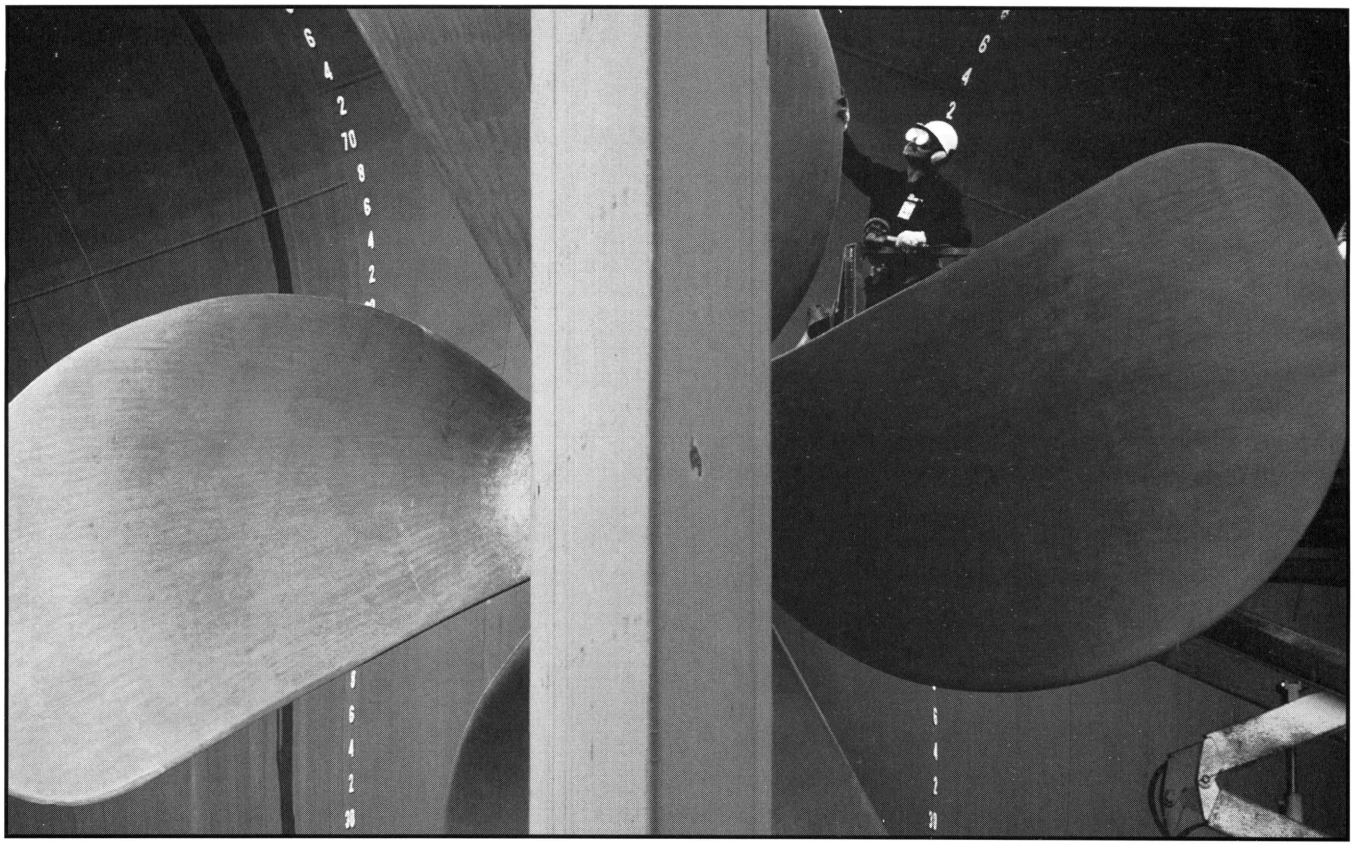

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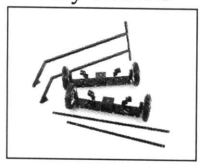

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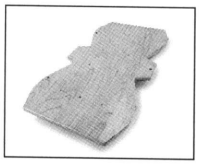

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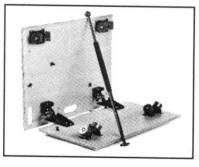

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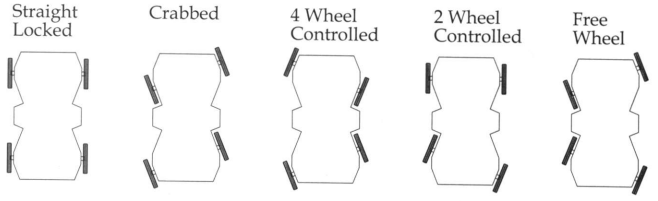

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June 1997 Vol. 78 No. 6

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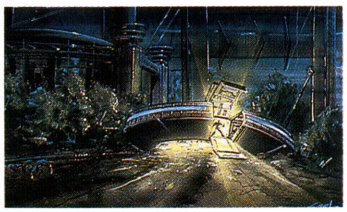

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On Our Cover: A vicious velociraptor goes on the attack in *The Lost World,* directed by Steven Spielberg and photographed by Janusz Kaminski, ASC (photo by David James, courtesy of Universal Studios and Amblin' Entertainment).

Contributing Authors: John Andrew Gallagher, Christopher Probst, Eric Rudolph, Frank Thompson

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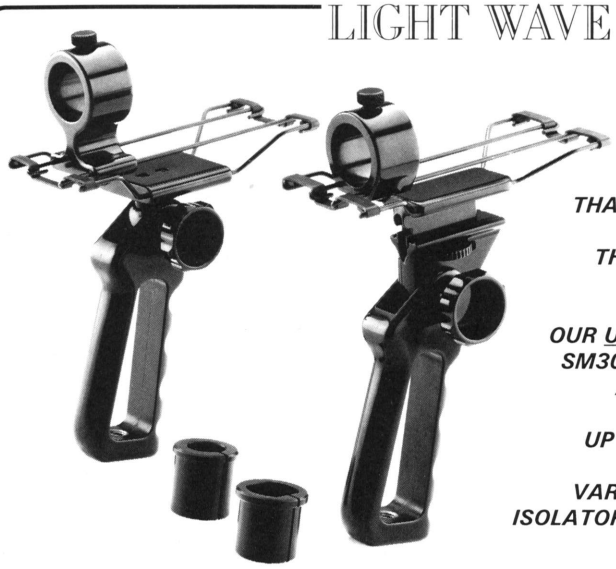

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June 1997 Vol. 78, No. 6

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The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as directors of photography and have demonstrated outstanding ability. ASC membership has become one of the highest honors that can be bestowed upon a professional cinematographer — a mark of prestige and excellence.

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ANGENIEUX ZOOMS IN

John Le Blanc on his favorite prime: the Angenieux 17-102.

Director/cameraman John Le Blanc is shooting a Mazda spot on a set in Chicago. On the front of the 535 is the zoom Le Blanc likes to call his "case of primes"—the Angenieux 17-102 T2.9.

Le Blanc and crew have been meticulously lighting and framing a shot that places Chicago Bull Scottie Pippen in the foreground with the car behind him. He arrives to take the place of his stand-in and—yikes—Pippen is at least 4" taller! With the 17-102 in place, though, there's no need to move the camera to reframe the shot. Le Blanc simply zooms to the exact focal length he needs.

Allows More Time to Light.

"I learned how to light from the Europeans—Vilmos and Laszlo," Le Blanc explains. "And that approach takes a little longer. The 17-102 buys me extra time to light, because I'm not moving the camera or changing primes repeatedly. For the Mazda shoot we had Scottie Pippen for only twelve hours and had three spots to do. The 6X17 helped me get the job done."

Maximum Flexibility.

"The Angenieux 17-102 replaces a case of primes as my primary optical tool. I save time by dialing in the focal length I want instead of waiting while it's found in a box, uncapped and mounted. And I don't have to choose between an 18 and a 24. I also have the 19, the 23 and everything in between."

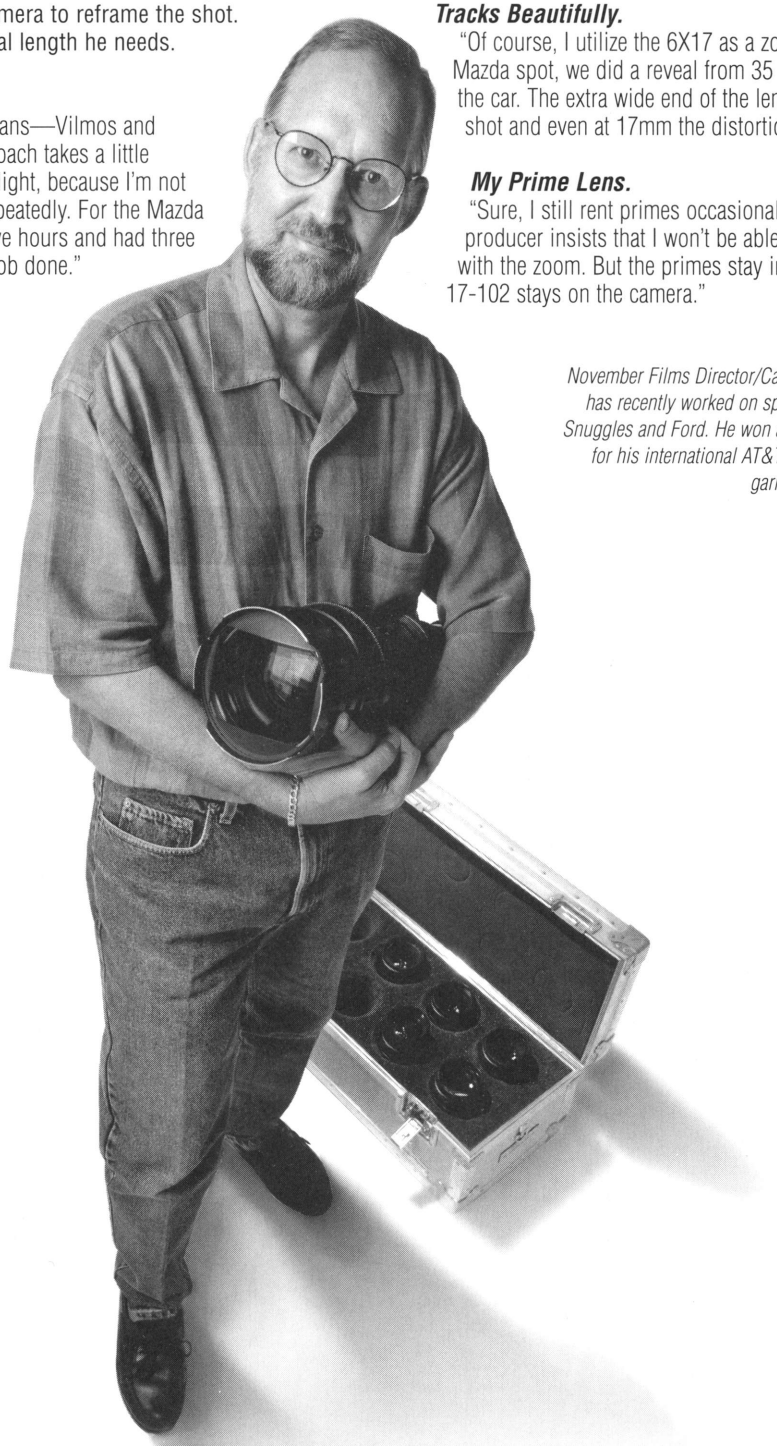
Tracks Beautifully.

"Of course, I utilize the 6X17 as a zoom, as well. For the Mazda spot, we did a reveal from 35 to 17mm—inside the car. The extra wide end of the lens was crucial to the shot and even at 17mm the distortion was minimal."

My Prime Lens.

"Sure, I still rent primes occasionally—when the producer insists that I won't be able to shoot everything with the zoom. But the primes stay in the box, while the 17-102 stays on the camera."

November Films Director/Cameraman John Le Blanc has recently worked on spots for Mercedes, BMW, Snuggles and Ford. He won a Golden Lion at Cannes for his international AT&T campaign and has also garnered four Omni Awards.



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Anamorphic lenses at Clairmont: extensive range and lots of them

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Left to right: 1600mm Nikkor T9, 800mm Nikkor T4.8, 50-500mm Angenieux HR T5.6, in PL mounts. Telephotos, zooms (and six primes) are also available in BNCR mounts.

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25mm Hawk T2.2	75mm Hawk T2.2
30mm Hawk T2.2	100mm Hawk T3
40mm Hawk T2.2	135mm Hawk T3
50mm Hawk T2.2	180mm Hawk T3
60mm Hawk T2.2	250mm Hawk T3

Left: 600mm Nikkor T4. Right: two T2.3 Arriscopes. At back: 36-200mm T4, based on latest Cooke 18-100mm spherical lens design.

Anamorphic telephotos:

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600mm Nikkor T4
600mm Canon T4.5
800mm Nikkor T4.8
800mm Canon T4.8
1000mm Nikkor T6.3
1000mm Canon T8
1200mm Nikkor T6.3
1200mm Canon T8
1600mm Nikkor T9
1600mm Canon T9
2000mm Clairmont T8
300-1200mm Canon varifocal T11

Anamorphic zooms:

28-140mm Cooke T4.5
34-204mm Angenieux T4.5
36-200mm Cooke T4.5
40-200mm Cooke T4.5
50-500mm Cooke T5.6
50-500 Angenieux HR T5.6
300-1200mm Clairmont/ Canon T11

100mm Arriscope T3.5, 100mm Clairmont T3.4. Smaller lens is for Steadicam, hand-holding.

Anamorphic primes:

22mm Clairmont T2.4
24mm Cinevision T1.6
24mm Todd AO T1.6
28mm Todd AO T3.9
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38mm Todd AO T2.3
40mm Arriscope T2.3
40mm Clairmont T2.3
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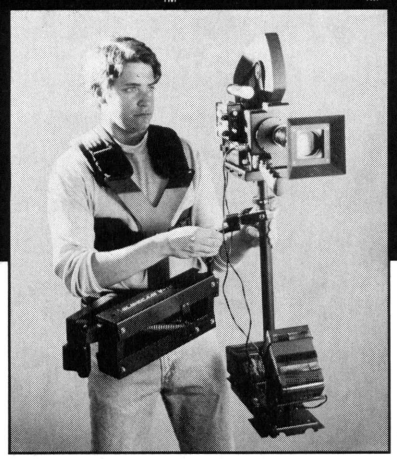

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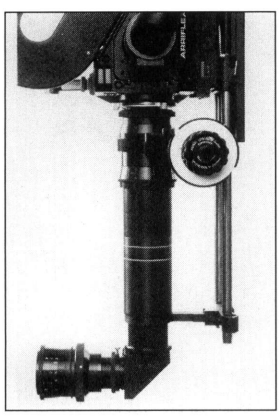

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Letters

Software Followup I

Jay Holden's article "The Desktop Cinematographer" [see *AC* April '97] is notable for its omissions. To start with, it makes no mention of my series of *Cinematographers's Computer Programs* for Sharp Wizard and IQ Organizers which have been available since about 1985 (and still are), and for which I received an Academy Technical Achievement Award in 1987.

The program has over 80 routines on it, including sunrise, sunset, dawn and dusk, and sun positions for any day, any time and in any part of the world — both true and magnetic. It's also very good for focus splits.

For anyone who wishes to know the position of the moon, Mars or Jupiter, I recommend Peter Duffet-Smith's *Astronomy with Your Personal Computer* book and program, which costs about $30.

The article also fails to mention Jack Smith's *DotZero Scheduling, Budgeting and Accounting* programs, which were also the first of their kind and received an Academy Technical Achievement Award. The extraordinarily good budgeting and scheduling programs, which run under Windows 95, are now available off the Internet (http://www.leonardo.net/starcomp). If the user likes them, the cost for each is $49.95.

— David Samuelson
London, England

Software Followup II

In response to *AC*'s recent article on production software, "The Desktop Cinematographer," I was greatly disappointed to read that our sunPATH software was not included. When I heard about the piece, I contacted Mr. Holden, who told me he was unaware of our software.

sunPATH is an affordable, easy-to-use program that has found broad acceptance by cinematographers, photographers, assistant directors, producers and locations scouts throughout the world. A number of ASC members, including Steven Poster, Thomas Ackerman and Roy Wagner, use the program regularly.

— David Parrish
President,
Wide Screen Software
North Hollywood, CA

[Ed. note: The SunPATH software for the Apple Macintosh tracks the position of the sun for any day, anywhere on Earth. The program includes a comprehensive database of over 39,000 locations worldwide. The database includes latitude, longitude, time zone, daylight savings time and magnetic declination information for each location. Users select a location without the need to enter any information other than the date range.]

The Computer Age

While Steven Poster, ASC makes a great argument debunking evolving electronic formats and their marketing [see Filmmakers Forum, *AC* April '97], he has forgotten one medium that has been picking up speed — the digital computer hard disk. Productions that are typically low-res in nature can be captured on disk, edited on disk and transmitted on disk to another remote location. Products such as Hitachi's new MPEG-1 camera can capture 30 minutes of images, which can then be edited on an Avid machine and transmitted via T-3 lines at 45 Mbps. Of course, this sort of full-fledged production scheme is in the incubation stage when compared to film, but no one can deny the evolution of the computer over the past 10 years and the impact of computer technology. Just look at special effects progress over the last decade.

What does this mean to film? A possible precursor to a world where a full-fledged production is shot on disk, edited on-line in a short time (due to the fact that the film transfer or work print process is eliminated) and transmitted via fiber or satellite to a movie theater. If this doesn't take the place of film, it might take the place of tape. Either way,

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it will further encroach upon a world in which film is bumped aside.

— Phil Bishirjian
Long Beach, CA

Mitchell's the Man

It is with great concern that I read of your recent decision to engage Rick Mitchell [see Letters Column, *AC* April '97] as a technical consultant, thus pre-empting his frequent correspondence.

I'm sure I am not the only reader who looked forward to Mr. Mitchell's letters as a source of history and information about the grand and extinct large format photography and projection of the "roadshow" days. His correspondence provided me with much knowledge about the glorious presentations I fondly remember, and of which today's moviegoing experience is woefully devoid.

Sure, we'll no longer have to read that *Dr. Zhivago* was shot in 65mm in a magazine that should know better, but the letters column will be sadly impoverished for it.

The obvious solution is to provide Mr. Mitchell with a regular forum for his scholarly dissertations. Perhaps he could author a series of article on the development of VistaVision, Technorama 70, D-150 and the metamorphosis of Cinerama.

— William Luca
Salem, MA

[Ed. note: Mr. Mitchell's ideas and story pitches are always welcomed by the magazine. So, for that matter, are his letters. However, the staff felt that it was in the best interests of AC *to sign up Rick as an additional fortification against factual inaccuracies. We're certain that his byline will continue to appear in upcoming issues.]*

Next Month in AC:

Batman and Robin
Director: **Joel Schumacher**
Cinematographer: **Stephen Goldblatt, ASC**

Contact
Director: **Robert Zemeckis**
Cinematographer: **Don Burgess, ASC**

Box of Moonlight
Director: **Tom DeCillo**
Cinematographer: **Paul Ryan, ASC**

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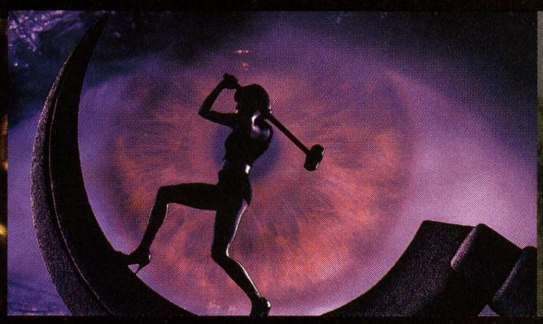

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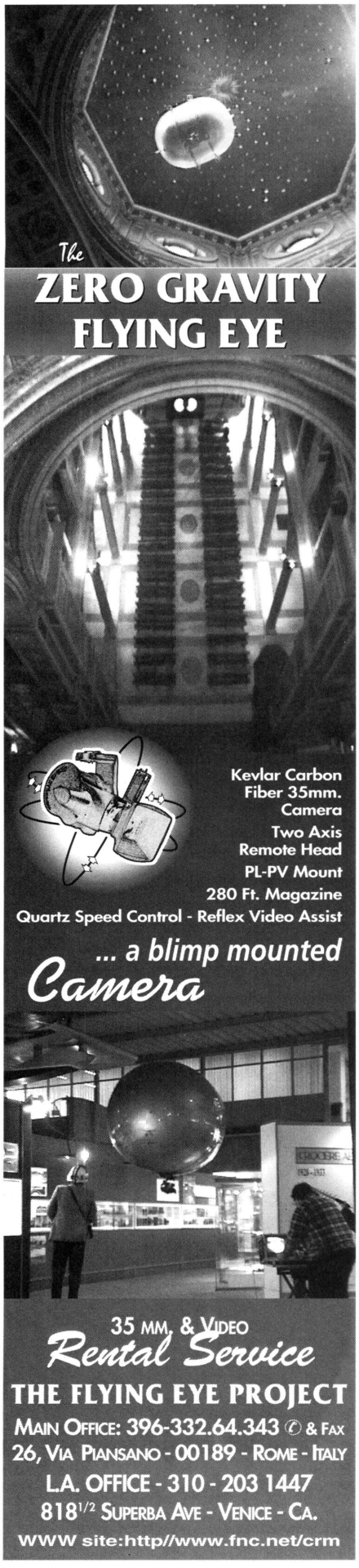

The Federal Communications Commission unleashed some powerful forces last year with its decision to allow the picture standard for digital television (DTV) to be determined by "the marketplace."

The licensees for the approximately 1,600 new digital television stations are being lobbied ferociously by the computer and consumer electronics industries in a high-stakes effort to define the future of DTV.

The broadcasters tend to envision DTV as improved pictures and sound, along with data services thrown in for good measure. The computer industry views it as that and much more. Underlying both industry visions is an intense distrust of the other camp.

Lying at the core of this disparity is the manner in which pictures are scanned on the video display. The computer industry advocates the progressive scan method (better for displaying text and graphics) while the consumer electronics industry (with the support of most large broadcasters) insists on the less-pricey interlaced scanning (with its lower bandwidth and greater spatial resolution).

"Let me edit it down for you: We are going into the TV business," Robert Stearns, senior vice-president of technology and corporate development at Compaq Computer, told an audience of top media executives this spring at the Variety/Schroder Wertheim Big Picture Media Conference in New York City.

Stearns said that Compaq, Microsoft and Intel plan to dominate the market for digital television receivers, and that all models will offer progressive scanning technology. "We can bootstrap digital television many times faster than traditional television manufacturers, and we plan to."

The computer industry, Stearns insisted, has no intention of honoring the multiple formats within the Grand Alliance DTV standard embraced by the consumer electronics industry and the National Association of Broadcasters. "We believe the current thinking of certain television and consumer electronics companies is a serious obstacle to the notion of convergence [of television and computing]," he said. "By continuing to rely on an interlaced display format, the ability to satisfy consumer demand for compelling video and web-based content will be severely limited."

A Rift Over DTV

by Frank Beacham

Compaq, Microsoft and Intel have proposed that DTV broadcasts use a 1280 x 720 progressive format for film-based programming, which now comprises more than 70 percent of prime-time network schedule. "For people who think that high resolution means 1080 interlaced," Stearns said, "I don't know what to say, other than 'Get a life!'"

According to Stearns, there's also a consensus that progressive scan technology is the goal for DTV. "Let's make it sooner rather than later," he said. "We know that progressive systems — and the infrastructure associated with them — need not be any more expensive [than interlaced systems], despite what some of the entrenched suppliers today would have you believe."

As part of a strategic move to overwhelm the consumer electronics industry, the computer companies plan to quickly flood the market with DTV technology. "If we start in 1998, by the year 2005 we should have about 20 to 50 million PCs capable of decoding DTV," said Stearns, in contrast to public estimates by the consumer electronics industry which predict that one million DTV sets will be sold by 2005.

The dispute over incompatible DTV receivers could have a huge impact on how television stations choose to transmit their new digital signals. If broadcasters select interlace DTV production equipment with no compromise between the consumer electronics and computer industries, then television pro-

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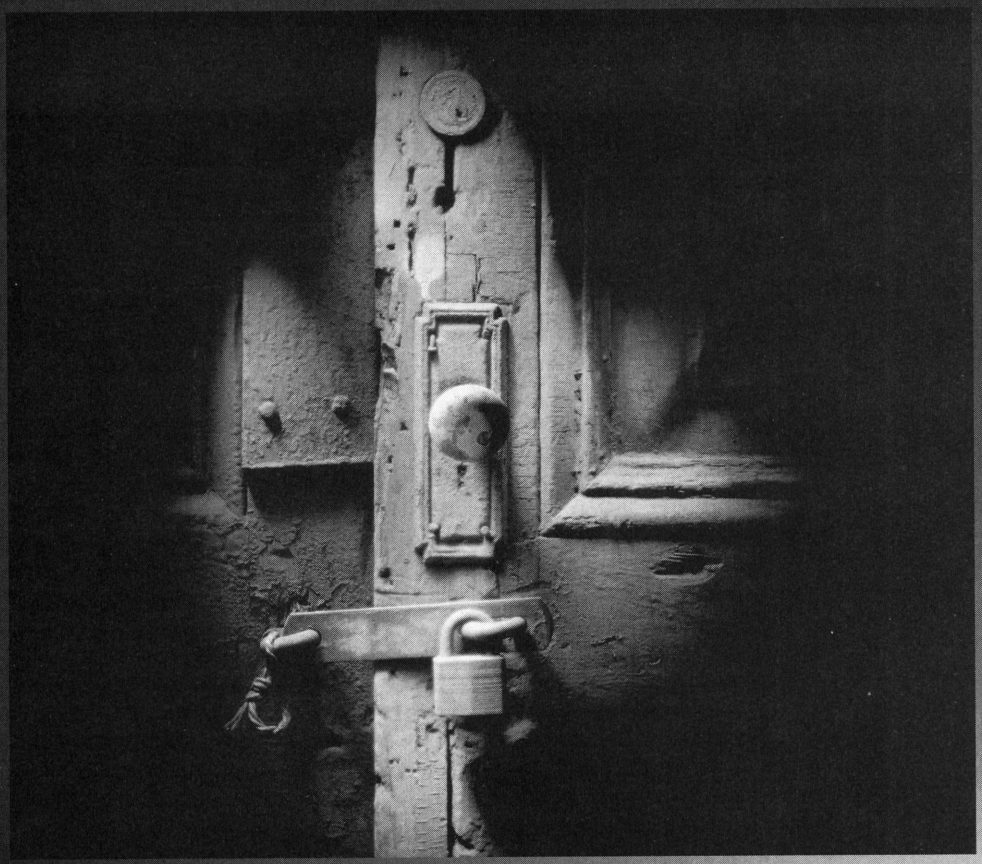

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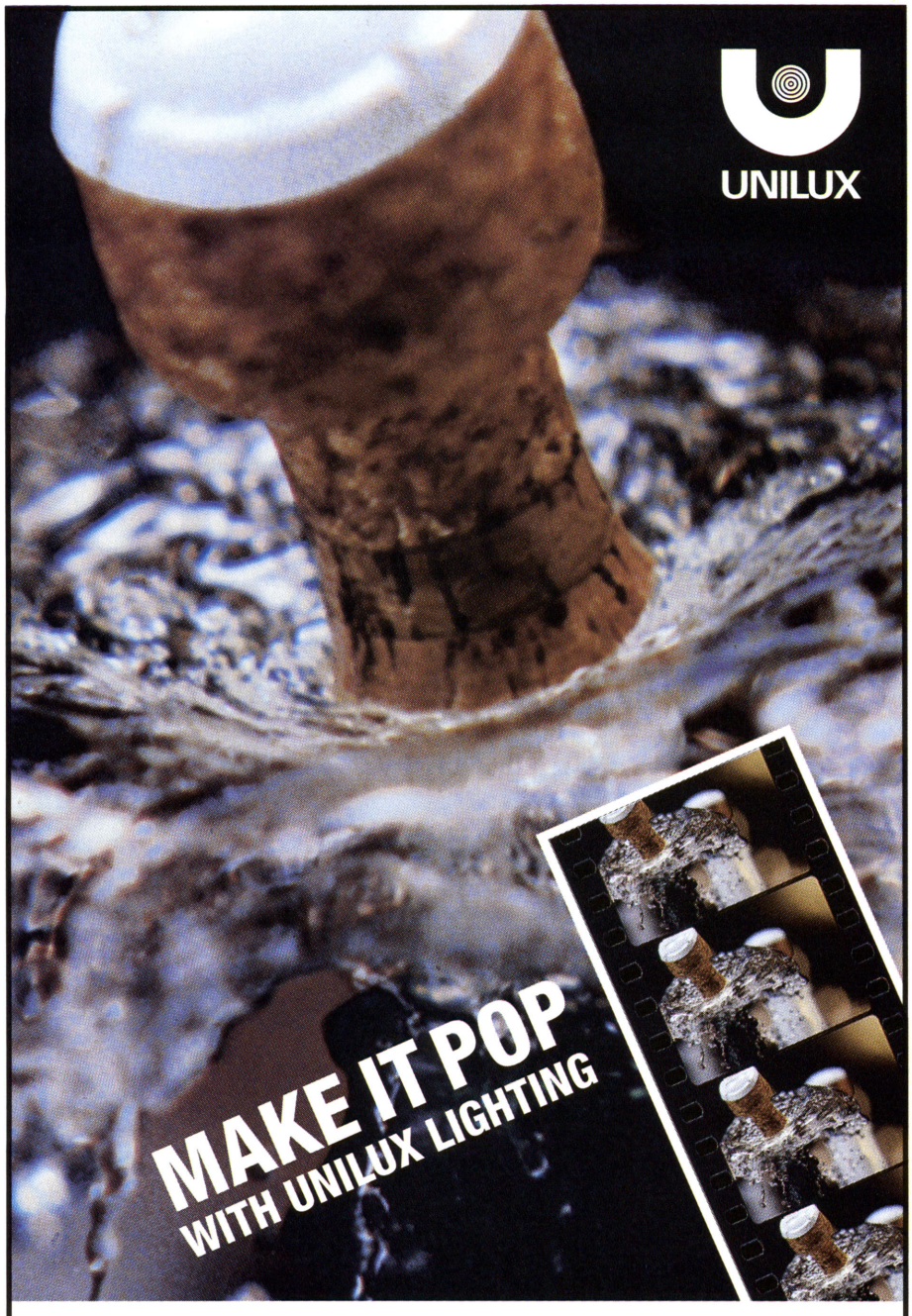

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gram transmissions could conceivably not be available on millions of PC-based progressive scan receivers.

Broadcast equipment suppliers are split on a response to the computer industry's position. Panasonic, said director of digital technology Phil Livingston, is open to a market decision on progressive versus interlace, and will provide either 720P or 1080I equipment to broadcasters, depending on their preference.

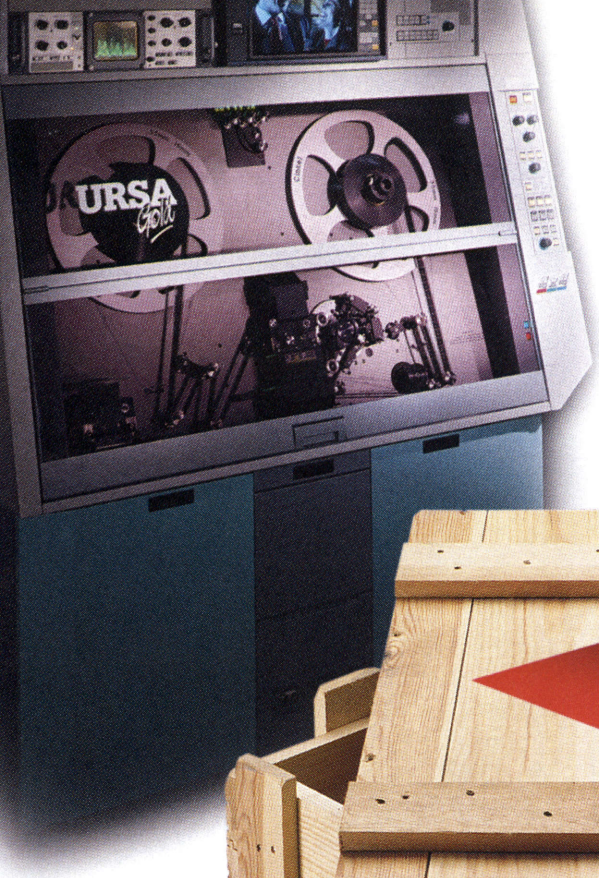
Sony, however, has taken the lead as a major supporter of the 1920 x 1080 interlaced HDTV production standard (SMPTE 274M) due to its improved spatial resolution.

"I would agree with the computer industry that if you want to go to 720 progressive you can build that equipment for a small premium above the 1080I," said Larry Thorpe, Sony's vice-president in charge of HDTV. He also noted, however, that there's an inherent problem with the 720P's spatial resolution being lowered just to reach the same data rate as 1080I. "Where we differ [with the computer industry] is that we really don't believe that dropping spatial resolution so drastically just to get 60-frame progressive today is a good first step," Thorpe said. "We very strongly believe that HDTV is first and foremost about spatial resolution. I'd love to have 60-frame progressive, and we have pledged to get there. But if we start with 1920 by 1080I at a high spatial resolution, it can be de-interlaced down the road without significant penalty."

The bottom line, noted Thorpe, is that if you record today on 1080I and up-convert later to 1080P, better spatial resolution will result than if the program had been recorded originally on 720P. "The 1280 by 720P standard has just 44 percent of the spatial resolution of 1920 by 1080I," he said. "That's just too big a hit."

Thorpe predicted that it will be some 5 to 10 years before the three gigabits-per-second bandwidth needed for 1080P can be compressed enough to pass through a six-megahertz television channel. That's right about the time everyone will once again have to purchase new video production equipment. ◆

(Frank Beacham is a New York City-based writer and producer. Visit his web site at: http://www.beacham.com. Mail: 163 Amsterdam Ave. #361, New York, NY 10023. Email: frank@beacham.com.)



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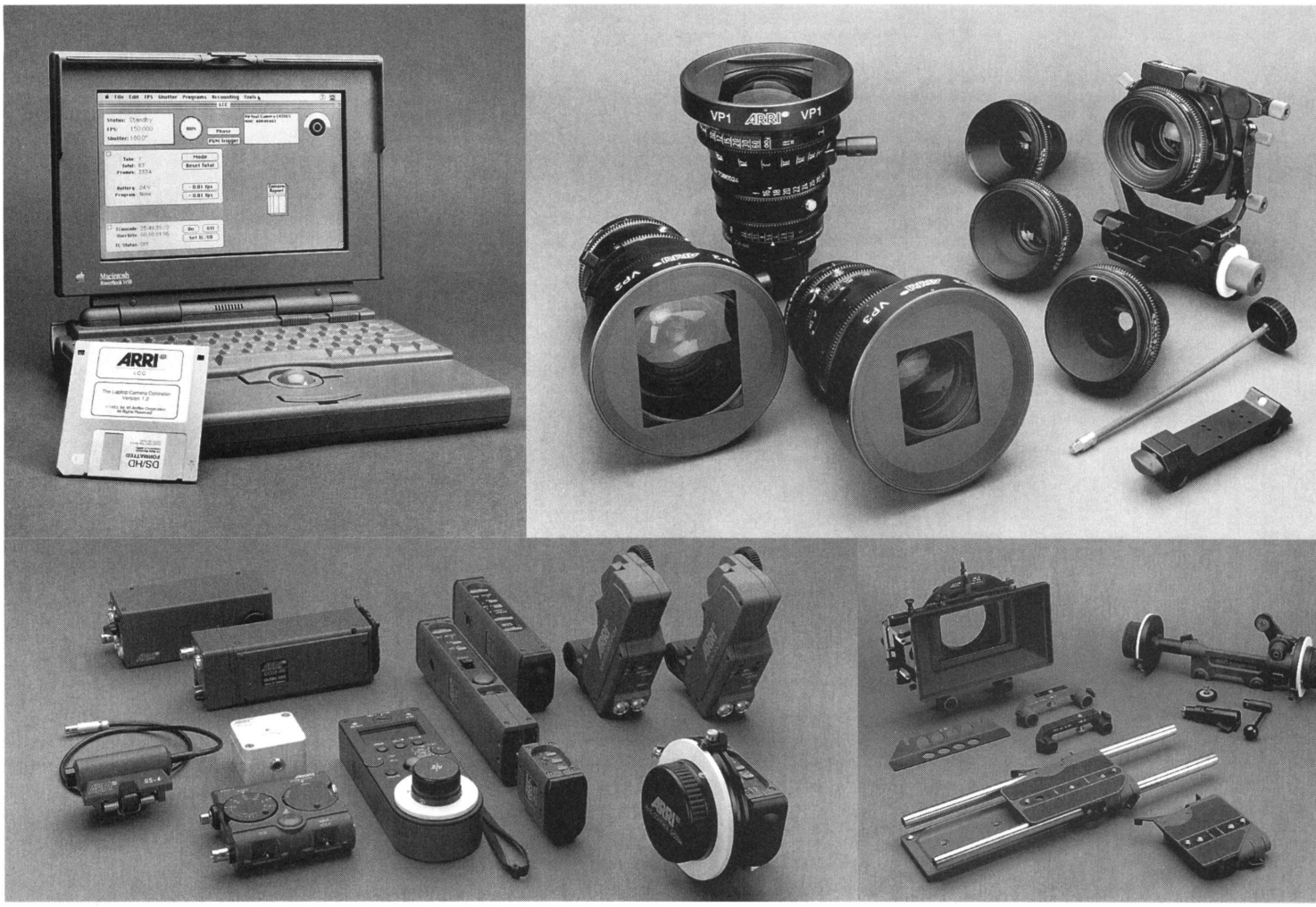

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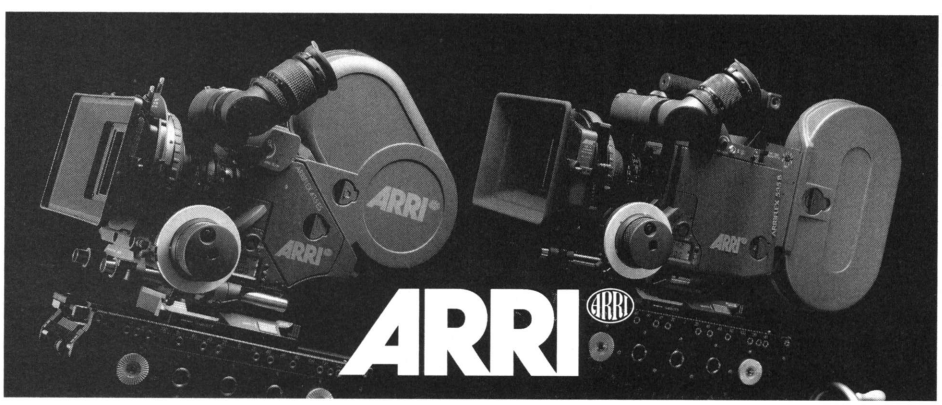

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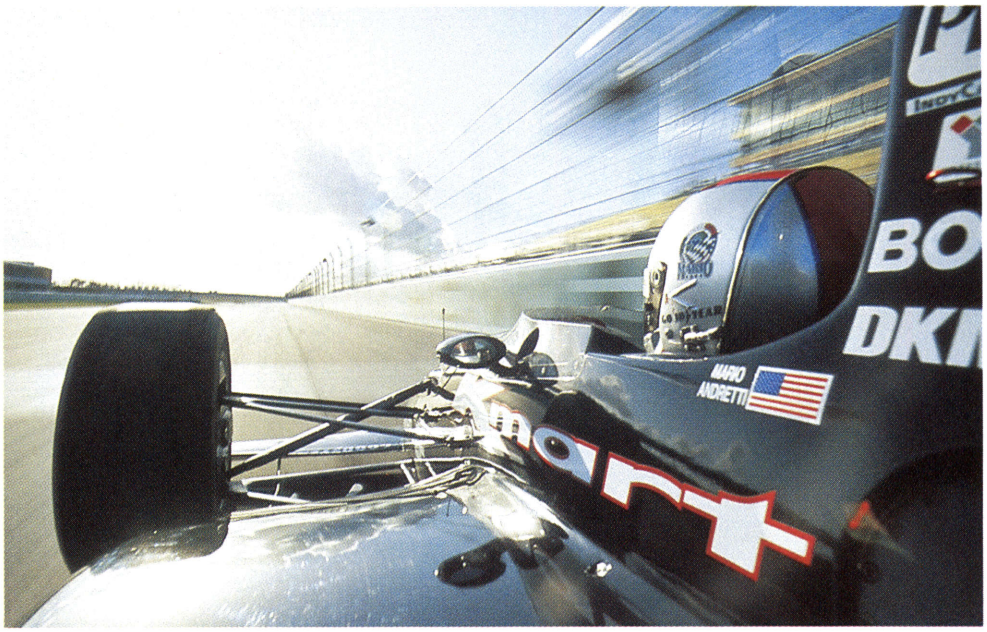

Photos courtesy of Open Wheel Productions.

Above: ***A Formula One racing car tears down the track at 230 m.p.h. in*** **Super Speedway.** ***This shot was captured with the MSM 9801, a lightweight Imax camera which earned MSM Design a 1996 Sci-Tech Award.*** **Center:** ***Camera crew becomes pit crew as the production team adjusts an Imax camera mounted to a racing vehicle.***

Super Speedway
by Eric Rudolph

If whipping around serpentine race tracks at 230 m.p.h. with Mario Andretti at the wheel is your idea of fun at the movies, then prepare for a visceral, high-definition treat.

Super Speedway chronicles the building of a state-of-the-art Formula One racing car, and the first efforts of Mario's son, Michael Andretti, to drive that car; a secondary storyline documents the restoration of a classic 1964 Indy roadster once driven in competition by the now-retired senior Andretti.

To put viewers in the cockpit, a lightweight Imax camera was mounted on a Formula One racing car. However, be warned — this is not a ride for the faint of heart.

This thrill-ride of a film would not have been possible just a few years ago. "The new, lighter Imax camera made *Super Speedway* possible," explains director and Imax specialist Stephen Low *(Across the Sea of Time, Titanica).* "The Imax cameras all weighed 100 pounds, more or less, until just a few years ago. Because the new camera

weighs about half as much, we were able to mount one on the race car and go well over 200 m.p.h., as well as shoot handheld footage in the pits."

The new camera used for *Super Speedway,* the MSM 9801, was designed and manufactured by MSM Design of Hayden Lake, Idaho, Marty Mueller's well-established effects and large-format camera firm. (The company's camera rental operation was recently purchased by Imax).

The MSM 9801 is the first Imax camera to feature a 180-degree shutter, and recently received a 1996 scientific and engineering Academy Award.

The MSM 9801 weighs in at 54.6 pounds in full production mode (with a matte box, follow-focus rig, color video assist, 1,000-foot magazine, 40mm lens and viewfinder). In stripped-down handheld mode (sans follow-focus, matte box and video assist) the camera weighs only 47 pounds.

"We can get it down to 37.4 pounds with a 500-foot magazine," notes *Super Speedway*'s camera operator, Bill Reeve, "but then you only have a minute-and-a-half of filming time." The camera can also be fitted with a 2,700-foot magazine, which allows a little over eight minutes of filming before reloading is required (the larger magazine takes Kodak's thinnest Estar-based film).

A key concern in making *Super Speedway* was how much speed the 1994 Formula One car could attain when saddled with a 50-pound camera. The fact that the vehicle would be just a camera car — and not in actual competition — provided the answer. As Mario Andretti explains, "We were not bound by the limitations of the racing rules on horsepower for the camera car, so we were able to add considerable extra horsepower. We hit 210 m.p.h. out of the box."

Low adds,"None of the racing scenes were undercranked; we didn't have to do that, because the camera car was routinely hitting speeds as high as 230 m.p.h.."

Anyone familiar with television coverage of automobile racing knows that cockpit cameras are omnipresent; *Super Speedway* had to offer something different, in addition to the Imax format's big image. "We looked for spots on the car where TV cameras had not been placed," explains Reeve. The filmmakers came up with four basic po-

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sitions, all of which had a few possible variations. "We ended up using mounts on the front nose cone, looking forward or back at the driver; the side pods on risers, looking over the driver's shoulder; on the roll hoop, looking forward and backward; and on the rear wing, high up."

The customized camera mounts proved crucial to the production. "Alec Greave, who designed the camera mounts, deserves a lot of the credit for the success of the film," says Reeve, echoing comments made by all of the *Super Speedway* filmmakers.

The camera was mounted on an articulating claw ball secured to metal braces attached to the car with long, high-grade, socket-head cap screws. Vibration was a serious problem from the start, however. Explains Reeve, "The entire body of these cars is connected, in some way, directly to the engine. We encountered harmonic vibrations that were disrupting the camera's electromechanical components and effectively shutting it off. We consulted with the Bendix Corporation, which recommended using sorbothane as an intermediate cam, to break the mechanical connection between the camera and the engine. The sorbothane worked."

However, too smooth a view was not desirable either. "We had to fine-tune the mounts so that there was some tolerable level of vibration, as well as enough pitching so that the viewer would feel the realities of the race environment," adds Reeve.

That sense of movement and power is effectively conveyed by one of Reeve's favorite shots. "When you're looking down at [driver] Michael Andretti from high up, in a full head-and-shoulders shot, you get a sense of just how much he is being thrown around by the tremendous forces these cars produce."

While the race car camera-mounting was the main logistical difficulty on *Super Speedway,* the fact that the Imax format requires so much light posed another challenge. Says director Low, "The lenses are slower and there is more glass for the light to travel through, but the images must have considerable depth of field to be effective. Also, we light just about everything, because we need to give the images more punch."

Super Speedway's director of photography, Andy Kitzanuck, elaborates, "When things are well-lit in regular 2-D Imax, they take on a 3-D quality."

Low notes, "These days, cinematographers are used to lighting a street scene with an inky; everyone is spoiled by the fast stocks and lenses. But when you shoot for Imax, it's like the old days. It's not easy, and it takes extra time."

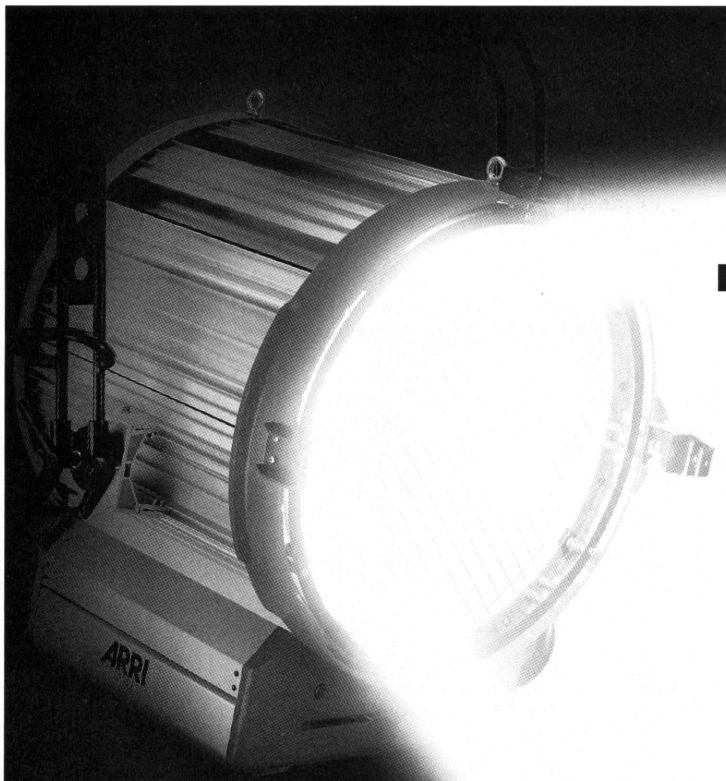
According to Low, the challenge of lighting for Imax has sent a few seasoned cinematographers into a lather. "There are some famous directors of photography with whom I've shot Imax films who've told me, in prep, that they've got it all figured out and not to worry. Then you're on the set, and [the cinematographer] is sweating and the gaffer truck keeps arriving all throughout the day with more and more lights!"

As for famous names behind the camera, *Super Speedway* has Mario Andretti, who is credited as the cameraman for the racing footage. Explains Low, "Mario had a button to start the camera; he was like a fighter pilot. He used his common sense; I basically told him, 'Go out and mix it up with those guys, and makes sure the camera is on when it gets interesting.' We gave him some tips about how close he should get and how much movement we wanted, and we told him, over the radio, which cars were approaching. But Mario had good instincts; he would see an opportunity and get the footage."

Andretti did have to rethink his basic approach to race car driving to obtain exciting shots, according to Low. "We had to tell Mario to let the other drivers — such stars as Mark Blundell, Bryan Herta and Al Unser, Jr. — to pass him. The footage would not have been very interesting with a clear track as the only view. Mario Andretti wasn't used to willingly letting other drivers pass him!"

Says Andretti, "I think I got lucky as hell, because you can't always predict what will happen. I don't think we missed any good shots."

Attaching an Imax camera to such a fast-moving vehicle was not the only first achieved on *Super Speedway.* "This was the first extensive use of handheld techniques in Imax," says Low. "We've done a little handheld work previously, but it was exhausting for the operator to use the 100-pound camera. But with the lighter MSM 9801 camera, Imax is actually a good format for handheld photography. Because of the



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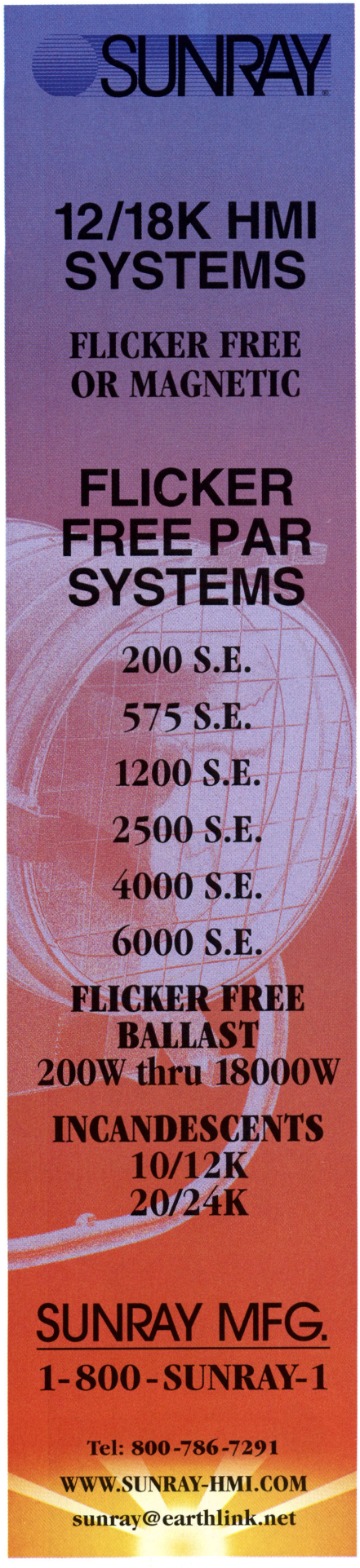

wide lenses we tend to use and, curiously, the weight of the camera, the images aren't overly shaky and sloppy."

Since Imax has a frame larger than any other motion picture format (and just slightly smaller than the 6x7cm medium-format still frame), optics must provide extraordinary resolving power. Logically, MSM turned to the medium-format still photography world, choosing lenses primarily from the venerable Hasselblad collection of Zeiss glass. Explains Reeve, "The MSM 9801 uses Hasselblad Zeiss lenses. The glass is the same, but the mount and the package has been re-manufactured by Marty Mueller."

Super Speedway used four lenses, including a 30mm f4, which has a 170-degree angle of view. The other lenses used on the film include a 40mm f3.5, 50mm f2.8 and 60mm f3.5. The car camera used the 30, 40 and 50mm lenses. "The 40mm is the closest to human eyesight," Reeve adds.

MSM offers seven other prime lenses for the 9801, ranging from an 80mm f2.8 to a 350mm f4.0. Rounding out the fixed-focal length stable is an 800mm f6.7 Pentax lens with an available 1.4X tele-extender. The only zoom is a Schneider 75-150mm f4.5.

Vision 500T stock was the main stock used on *Super Speedway*. "It was great, I loved it," says cinematographer Kitzanuk. "The blacks were wonderful, and it was not a problem if it was overexposed, which happened often. Remember, we had no aperture control once the camera on the car was rolling, and if the sun suddenly broke through the clouds, the film had to handle it, which it did wonderfully."

Reducing the camera's noise level by half, or close to it, will be essential to Imax's plans to move into more mainstream filmmaking, a move the company plans to make soon, according to recent news reports. "The MSM 9801 is crystal-controlled, but with noise levels of 52-55 dB's, it is not really a sync sound camera," says Reeve. "So far, the designers have spent most of their time on image steadiness and optical quality; Marty Mueller has built a blimp that works pretty well, but it's still just a blimp." Reeve credits the postproduction sound engineers with doing a great job of notching out the camera noise in *Super Speedway*.

While most of the project's technical hurdles were solved prior to filming, the *Super Speedway* filmmakers still endured many perilous moments. "When your eye is stuffed in a viewfinder, you're not always aware of the danger around you," camera operator Reeve notes. "There were a couple of times during reloading when [director of photography] Andy Kitzanuk came over to me and said, 'Did you know the wheels came within an inch of your knee?' Those wheels, of course, were going 200 m.p.h.!"

Ulee's Gold
by Jean Oppenheimer

The films of Victor Nunez are marked by a gentle, introspective quality. His first feature, *Gal Young 'Un* (1979), tells the bittersweet Prohibition-era tale of a wealthy widow charmed and abused by a young hustler. Nunez's sophomore effort, *A Flash of Green* (1984), follows a journalist who gets involved with the wrong crowd while investigating a Florida land-fill swindle. (Both films earned the Grand Jury Prize when screened at the Sundance Film Festival). The director's best known work, *Ruby in Paradise* (1993), explores the personal and economic struggles of a young Tennessee woman who emigrates to a West Florida beach town.

Nunez's most recent picture, *Ulee's Gold,* examines the ordinary life of Ulysses Jackson (Peter Fonda), a taciturn beekeeper and Vietnam war veteran who withdraws from life after being devastated by his wife's death and the subsequent collapse of his family. "He has removed himself from the world of people to the world of his work in the tupelo swamps, and he needs to come back to a sort of middle ground," explains Nunez, speaking by phone from his home in Florida. "The film is about his redemption [and how] a set of events that starts out darkly ends up offering the possibility of some kind of human care."

Although the scope and budgets of his films have steadily increased over the years *(Ulee's Gold* cost $2.7 million), Nunez is firmly entrenched in the independent arena. He writes, directs, operates the camera and edits on his films, while cinematographer Virgil Marcus Mirano, who has been with him since *Gal Young 'Un,* handles the light-

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ing duties. "Victor has operated on all of his films," says Mirano. "It's the only way he knows if he has the performance. He has everything in his head and he edits as he shoots."

Nunez never uses a script supervisor on the set. Continuity becomes a collective process shared by first AC Greg Garner and second AC Michael Caparelli, from their positions at the camera, and the director's son, Vincent, who sits at the video assist in an area separated from the shooting environment. The younger Nunez operates the Hi-8 recording, logging takes as well as camera and sound roll information. Other crew members gather around the video monitor: Mirano, who checks framing and action; Marilyn Wall-Asse, who attends to costume and make-up; and first AD Gus Holzer.

Left: ***Anguished loner Ulysses Jackson (Peter Fonda) seeks peace in Florida's tupelo swamps.*** **Below:** ***Director Victor Nunez (center) plans a setup with his actors.***

Photos by John Gramley, courtesy of Orion Pictures.

Nunez' films are shot in Super 16 and then blown up to 35mm (only *Gal Young 'Un* was shot on regular 16mm). Cost is certainly one consideration in this process, but Nunez also prefers the flexibility that 16mm allows him; he is able to move from one setup to another more quickly, and make adjustments more easily. "There is also a philosophical property to 16mm," muses Mirano. "The format comes from the pure world of documentary filmmaking, which is an unadulterated vision; it captures events but isn't an intrusion into the life of the subject, because the camera is so small and portable."

When Nunez began making movies, Aaton was the only company producing Super 16 cameras. He has stuck with Aaton through the years, citing the ruggedness, reliability and innovation of its products, and praising the company for its top-notch service and support. As for lenses, he still uses the original Cooke T2.8 zoom he bought some 15 years ago. As the first zoom manufactured for the Super 16 format, it is "a lens of excellent contrast and superb sharpness," says Mirano. In addition to the Cooke, Nunez uses a set of Zeiss T1.2 Superspeed primes for low-light situations and scenes involving car mounts.

According to Mirano, *Ulee's Gold* was the first Super 16 feature captured on Kodak's new Vision stocks: the 500T 7279 and the 320T 7277. Kodak, which was just beginning to manufacture the new 16mm stocks when the project was underway, offered Nunez and Mirano a small quantity to test against its older 7287 and 7298 stocks. On the first day of production the duo used the 98; it wasn't until that evening that they saw the test results on the new stocks, and found that the blacks were richer and that the grain seemed significantly finer and less noticeable. "In Super 16, your image area is extremely critical, and when you go through the blow-up process, grain and color saturation are always issues," notes Mirano.

The good news was that the Vision stocks looked great; the bad news was that this was about two months before the improved emulsions were available for general release, and Kodak didn't have a large quantity from which to draw. Mirano credits Robert Mastronardi at Kodak's Rochester plant for providing enough of the stocks to complete the picture. (Daylight exteriors were shot on 7245, a stock Nunez says is unsurpassed for shooting in bright sunlight conditions.) ➢

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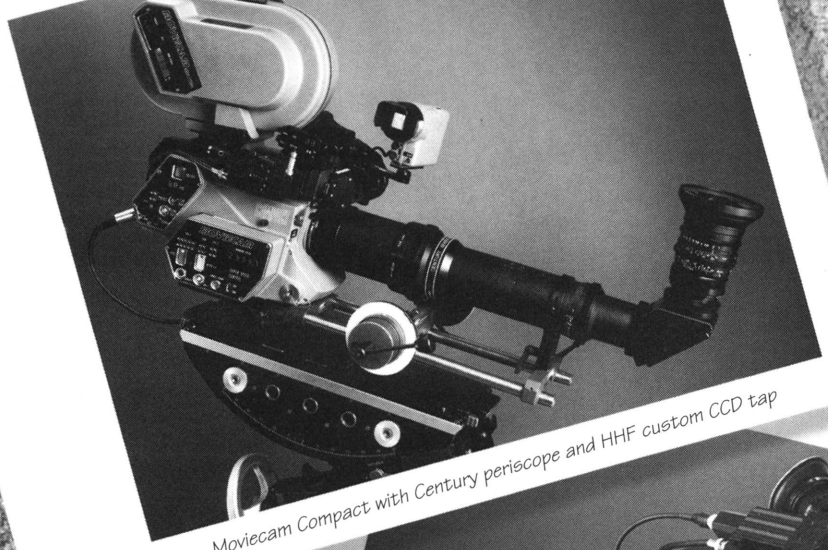

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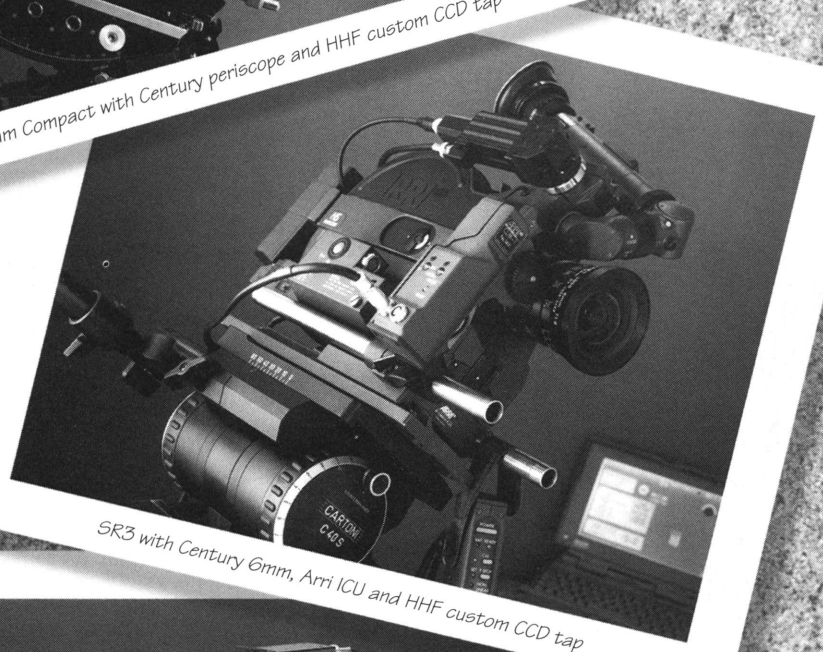

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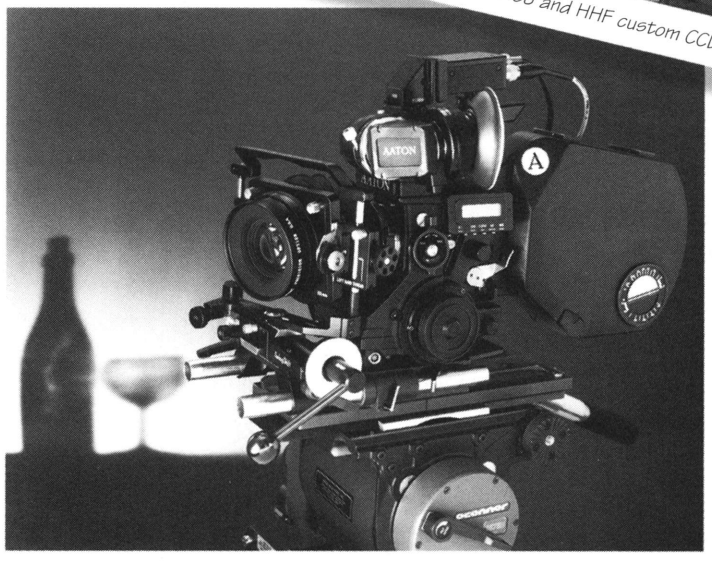

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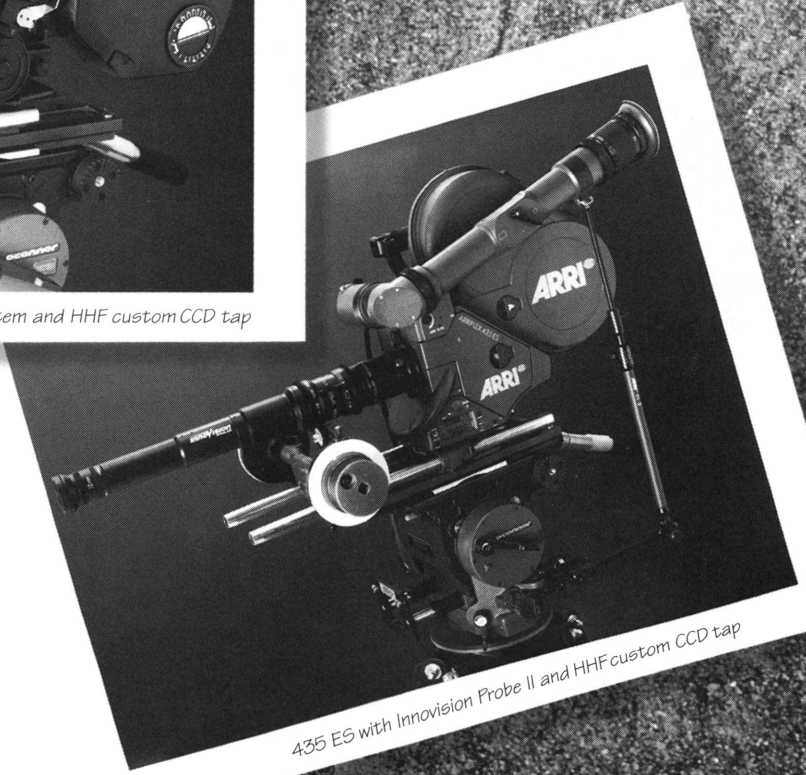

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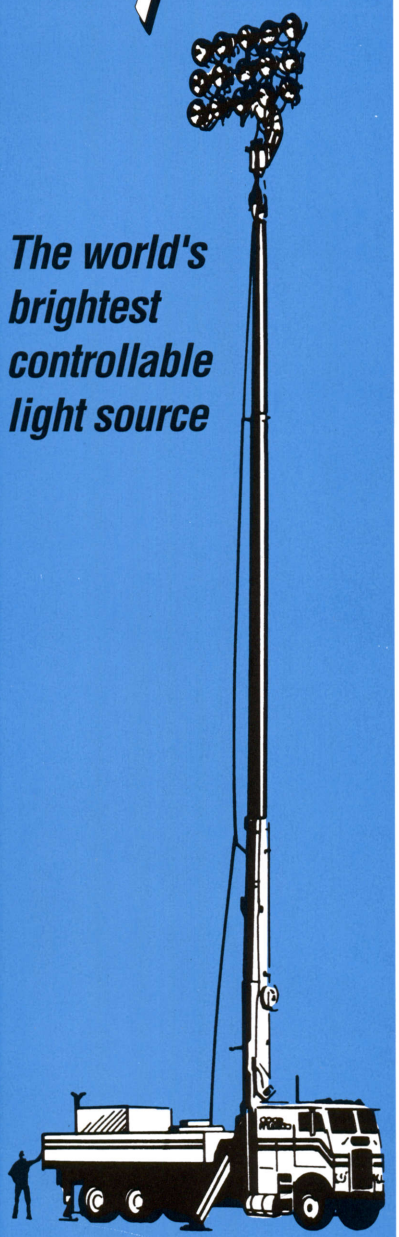
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Mirano found the new Vision 500 film to be a true 500 ISO, unlike the older 98, which he believes is not properly rated. "The 500T allowed us to achieve a much richer negative," he says. "I rated it at 400 ASA, which gave me about a third or half-stop more density in the original negative. I am very precise about my exposures [to ensure] that we give DuArt Labs a properly exposed negative to blow up." (Nunez has a long-term relationship with DuArt, whose president, Irwin Young, has a strong commitment to the Super 16mm format.)

According to Nunez, the light in Florida has very distinct properties, perhaps because of the state's proximity to the equator. "I always think of the light as having, for want of a better word, a golden side to it. Objects glow, especially in the spring and summer when there is a very bright, saturated look." With a laugh, he adds, "It seems that invariably we have to go through at least one answer print to rediscover what the Florida light is like."

Since half of *Ulee's Gold* takes place in the protagonist's house, the filmmakers took pains to subtly alter the look of the rooms depending upon whether it was morning, noon or late afternoon. And although Nunez likes to create the sense that the light comes from natural sources, the illuminmation is often provided by HMI fixtures set up outside every window. "I used filters and gels but nothing extraordinary," says Mirano. "After correcting back to 5500°K I would add a ⅛ CTO. Frequently on the interior-fill Kino Flos I would add a modest ⅛, maybe a ¼." Most night interiors were shot during the day, with the windows blacked out. The main reason for this was the presence of two minors in the film — namely, the two girls playing Ulee's granddaughters.

For Mirano, the toughest part of the shoot was dealing with the sun when shooting day exteriors. "You try to stage things under a canopy of trees so that when the sun changes, the light will still have the same dappled properties." Ulee himself passes in and out of shadows quite a lot as a subtle visual clue to his personality: as a man who has dropped out of life, he isn't comfortable in the light.

The film's title sequence — a long tracking shot through the swamp — makes lovely use of the sunlight. To shoot this protracted intro, a platform had to be built in the water with dolly tracks laid atop it. Nunez sat at the camera while key dolly grip Sean Coyne stood in the swamp in waders, pushing the dolly. Notes Mirano, "We laid out our pathway, deciding which trees we wanted to see and putting a partially submerged truck, which is crucial to the story, in its proper position. The whole idea was to go through the swamp, see the trees, catch the truck and then see Ulee in the distance tending to his bee hives."

The title sequence was digitized at DuArt, and the type was created in a computer. The entire sequence was then output to 35mm.

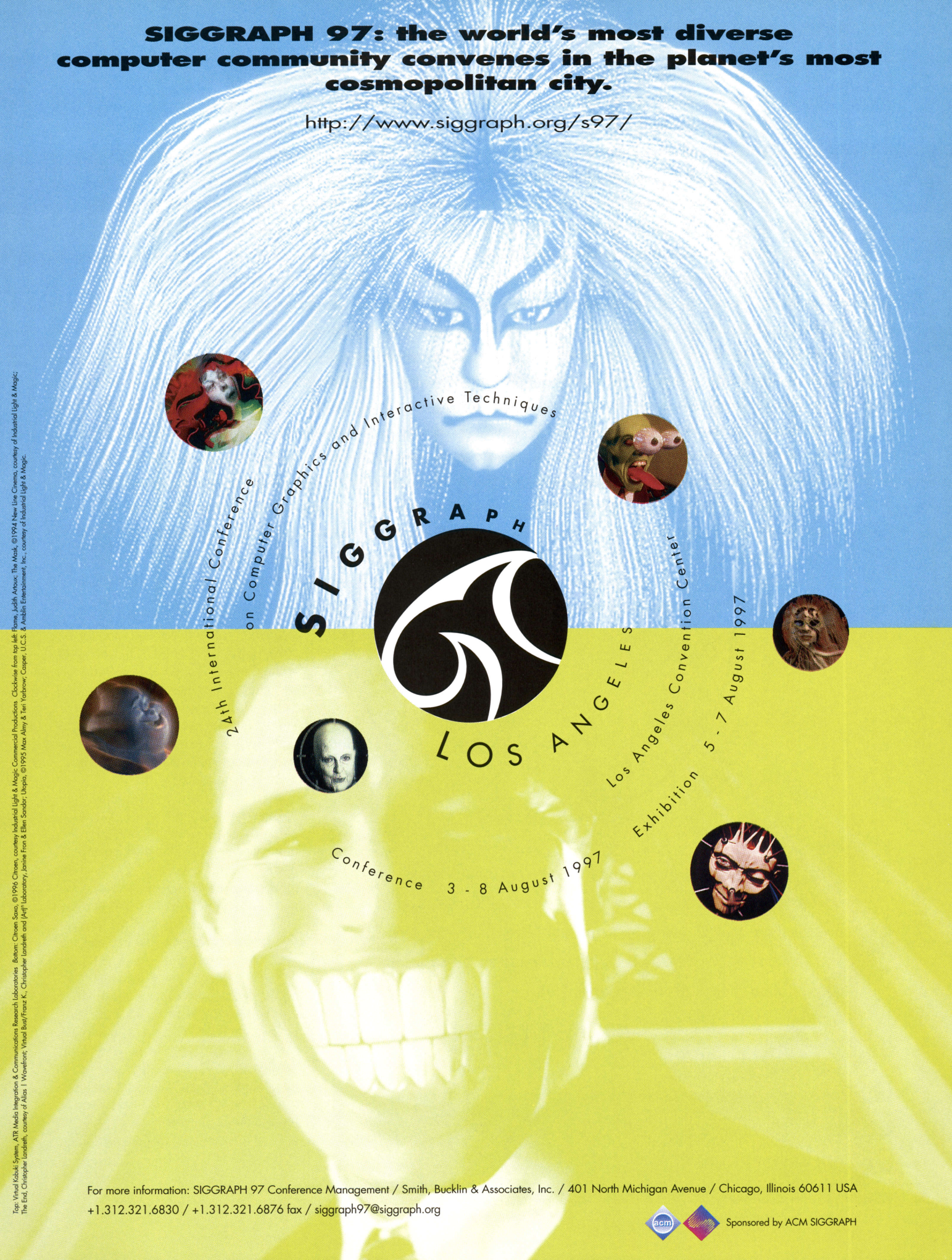
One other piece of equipment that helped immeasurably was Aaton's new color, flicker-free video tap; it not only allowed a much more accurate evaluation of what was being shot, but, due to the exorbitant expense of acquiring dailies (footage had to be sent from backwater Florida locations to New York for development), the tap offered an alternate means of evaluating a scene on the spot.

Explains Nunez, "A third bonus of the video tap's flicker-free, color composite signal was that it allowed us to record all takes onto Hi-8. At the end of the day's shooting, the last two takes of each scene were transferred with sound to VHS. This was then sent via FedEx to Orion Pictures for their timely review on a daily basis." We saved a tremendous amount of money by not having to deliver film dailies."

Like Nunez' previous films, *Ulee's Gold* is infused with a quiet emotional force and an intertwining sense of character, place and story. Mirano comments, "Victor's films freeze in time a property that is disappearing from our culture: the Southern ways, and the manners of the individual. He is so intimate with the region and locale that his films are about what is there. You can look at them in 25 years and know something about that area."

1997 Sci-Tech Awards

The Academy of Motion Picture Arts and Sciences (AMPAS) held its annual Scientific and Technical Acheivement Awards on March 1 at the Regent Beverly Wilshire Hotel, in a ceremony hosted by actress Helen Hunt.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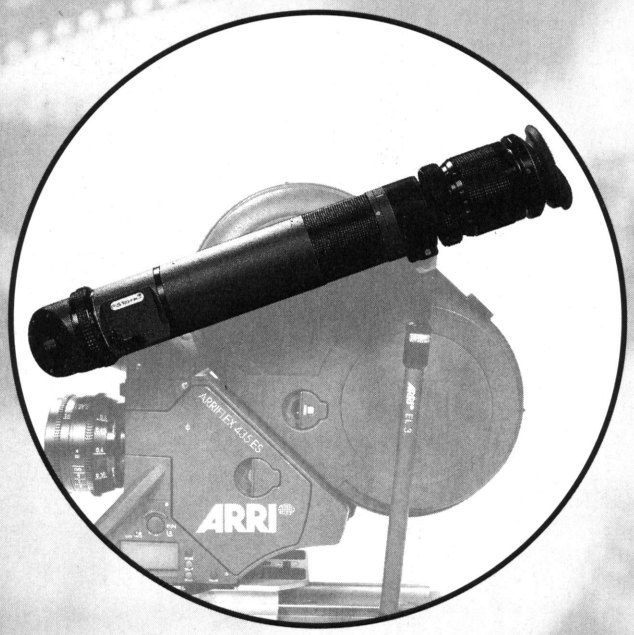

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These honors are presented for devices, methods, formulas, discoveries or inventions that have proved beneficial to the film industry.

Receiving Academy Certificates in the category of Technical Achievements were Richard A. Prey and William N. Masten for the design and development of the Nite Sun II lighting crane and camera platform; Brian Knep, Craig Hayes, Rick Sayre and Thomas Williams for the creation and development of the Direct Input Device; James Kajiya and Timothy Kay for their pioneering work in producing computer-generated fur and hair in motion pictures; Jeffery Yost, Christian Rouet, David Benson and Florian Kainz for the development of a system to create and control computer-generated fur and hair in motion pictures.

Also feted in this category were Grant Loucks for the concept and specifications of the Mark V Director's Viewfinder; Perry Kivolowitz, for the primary design, and Dr. Garth A. Dickie for the development of the algorithms for the shape-driven warping and morphing subsystem of the Elastic Reality Special Effects System; Nestor Burtnyk and Marceli Wien of the National Research Council of Canada for their pioneering work in the development of software techniques for Computer-Assisted Key-Framing for Character Animation; and Ken Perlin for the development of Perlin Noise, a technique used to produce natural-looking textures on computer-generated surfaces for motion picture visual effects.

Honored with Academy Plaques in the Scientific and Engineering category were William Reeves for the original concept and the development of particle systems used to create computer-generated visual effects in motion pictures; Jim Hourihan for the primary design and development of the interactive language-based control of particle systems as embodied in the Dynamation software package; Jonathan Erland and Kay Beving Erland for the development of the Digital Series Traveling Matte Backing System used for composite photography in motion pictures; and John Schlag, Brian Knep, Zoran Kacic-Alesi and Thomas Williams for the development of the ViewPaint 3-D Paint System for film production work.

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went to Joe Lombardi in celebration of his 50 years in the motion picture industry; his knowledge and leadership in the field of pyrotechnics and special effects along with his uncompromising promotion of safety on the set have established the standard for today's special effects technicians. The John A. Bonner Medal of Commendation, which is awarded in appreciation for outstanding service and dedication in upholding the high standards of the AMPAS, went to Volker W. Bahnemann and Honorary ASC member Burton "Bud" Stone. Finally, the Academy Award of Merit (an Oscar statuette) was bestowed upon the Imax Corporation for the method of filming and exhibiting high-fidelity, large-format, wide-angle motion pictures.

Screenwriters Forum

Words into Pictures: The 1997 Film and Television Writers Forum, is taking place at the Loews Santa Monica Beach Hotel from Sunday, May 30 to Friday, June 1 to provide a public forum for uncensored, stimulating dialogue on the writer's perspective.

The forum includes a comprehensive series of panel discussions, presentations, interviews, craft seminars and audience participation events.

Forum panelists include Steven Bochco, James L. Brooks, Cameron Crowe, Joan Didion, William Goldman, Buck Henry, Callie Khouri, Anthony Minghella, Rob Reiner, Ron Shelton, Robert Towne, Tracey Ullman, James Woods, Saul Zaentz and Laura Ziskin, among others.

All registered participants have access to the Writer's Trade Fair and Beachcomber Cafe and, in addition, are invited to submit a one-page synopsis of an available project for view throughout the Forum.

The Writers Guild Foundation is dedicated to the advancement of excellence in writing and the appreciation of the writer's role in the creative process. The Forum is presented with the cooperation and support of the Writer's Guild of America, West.

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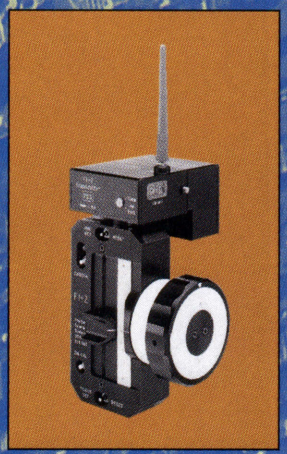

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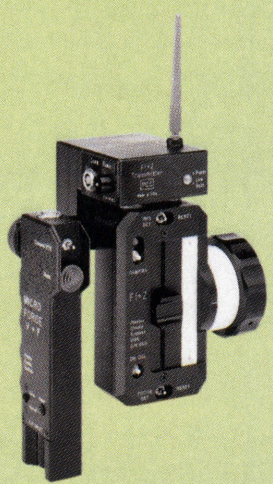

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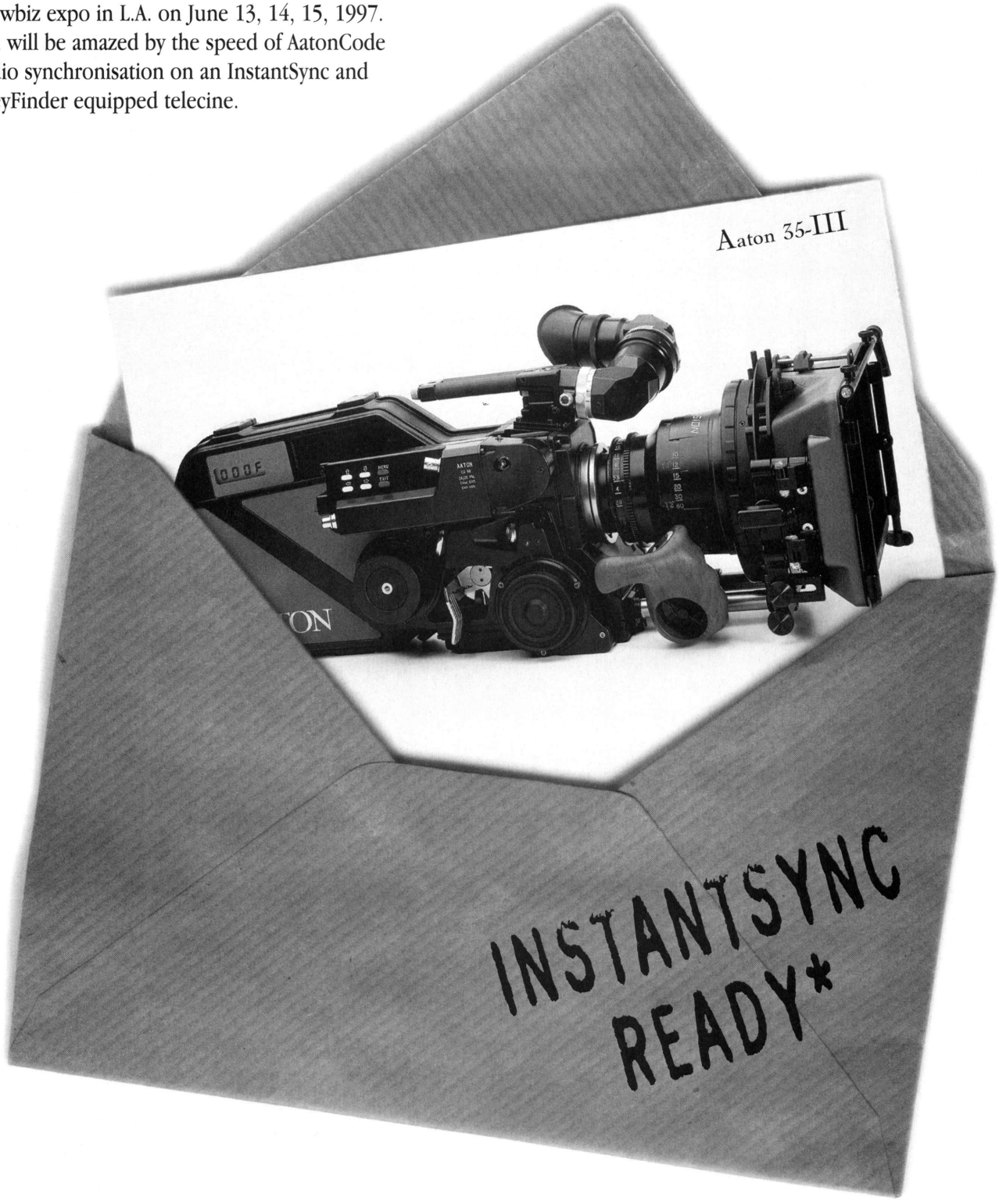

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Chase, Crush and Devour

Steven Spielberg and Janusz Kaminski, ASC team up to terrorize movie audiences with *The Lost World*, a darker, scarier sequel to *Jurassic Park*.

by Stephen Pizzello

Photos by David James, courtesy of Universal Studios & Amblin.

For film fans around the world, the credit line "A Steven Spielberg Film" heralds the promise of cinematic spectacle. As one of the most naturally gifted and successful directors of all time, Spielberg has continually upped the ante for himself by helming a seemingly ceaseless string of wildly popular and critically praised pictures: *Jaws*, *Close Encounters of the Third Kind*, the *Indiana Jones* trilogy, *E.T.*, *The Color Purple*, *Jurassic Park*, *Schindler's List*. But with each new project, the director must confront the pressure of satisfying the viewing public's ravenous appetite for new thrills. As Spielberg himself concedes, "They expect more than I could ever possibly give them."

With *The Lost World*, Spielberg faces another difficult challenge: to create a compelling sequel to *Jurassic Park*, one of the biggest box-office blockbusters ever. It's one thing to have a monkey on your back, but a Tyrannosaurus Rex can cause some serious spinal stress. "One of the most overwhelming questions that people have asked me directly in the past few years was, 'When are you going to do a sequel to *Jurassic Park*?'" Spielberg says. "I've heard that for the past 15 years about *E.T.* as well, but I've been steadfast in my desire never to produce or direct an *E.T.* sequel, because it was such a personal film for me. I had a tough time saying no as steadfastly to something that is exploitable as *Jurassic Park* — and when I say that, I mean exploitable in the sense of pure adrenalin, excitement and adventure."

Spielberg (left) and Kaminski make nice with one of Stan Winston's animatronic creations — a baby stegosaurus.

The premise for the new film was dreamed up by *Jurassic Park* author Michael Crichton, but screenwriter David Koepp had to employ some deft sleight of hand to skirt around a few nagging loopholes left over from the original picture's story. As *Jurassic Park* fans will recall, genetically engineered dinosaurs were cloned from ancient DNA by short-sighted scientists on an island off the coast of Costa Rica — with lethal consequences. *The Lost World* reveals that more of the giant animals were manufactured on a second island, where a hurricane has wiped out the breeding facilities and allowed the prehistoric beasts to run wild.

Still hoping to capitalize on their investment, the amoral leaders of InGen, the corporation that bred the dinosaurs, have sent a group of hunters to the second island to round up some of the creatures and bring them back to the U.S. mainland, where they can be exhibited for commercial gain. Meanwhile, InGen's ousted founder, John Hammond (Richard Attenborough), has turned over a new philosophical leaf after surviving the dinosaur debacle at his theme park. In the hopes of learning more about the prehistoric beasts "for the benefit of mankind," Hammond has dispatched a team of scientists led by paleontologist Sarah Harding (Julianne Moore), who happens to be the girlfriend of chaos theorist Ian Malcolm (Jeff Goldblum), another survivor of the Jurassic Park fiasco.

Mindful of the dangers that await his paramour, Malcolm trails her to the island, where the

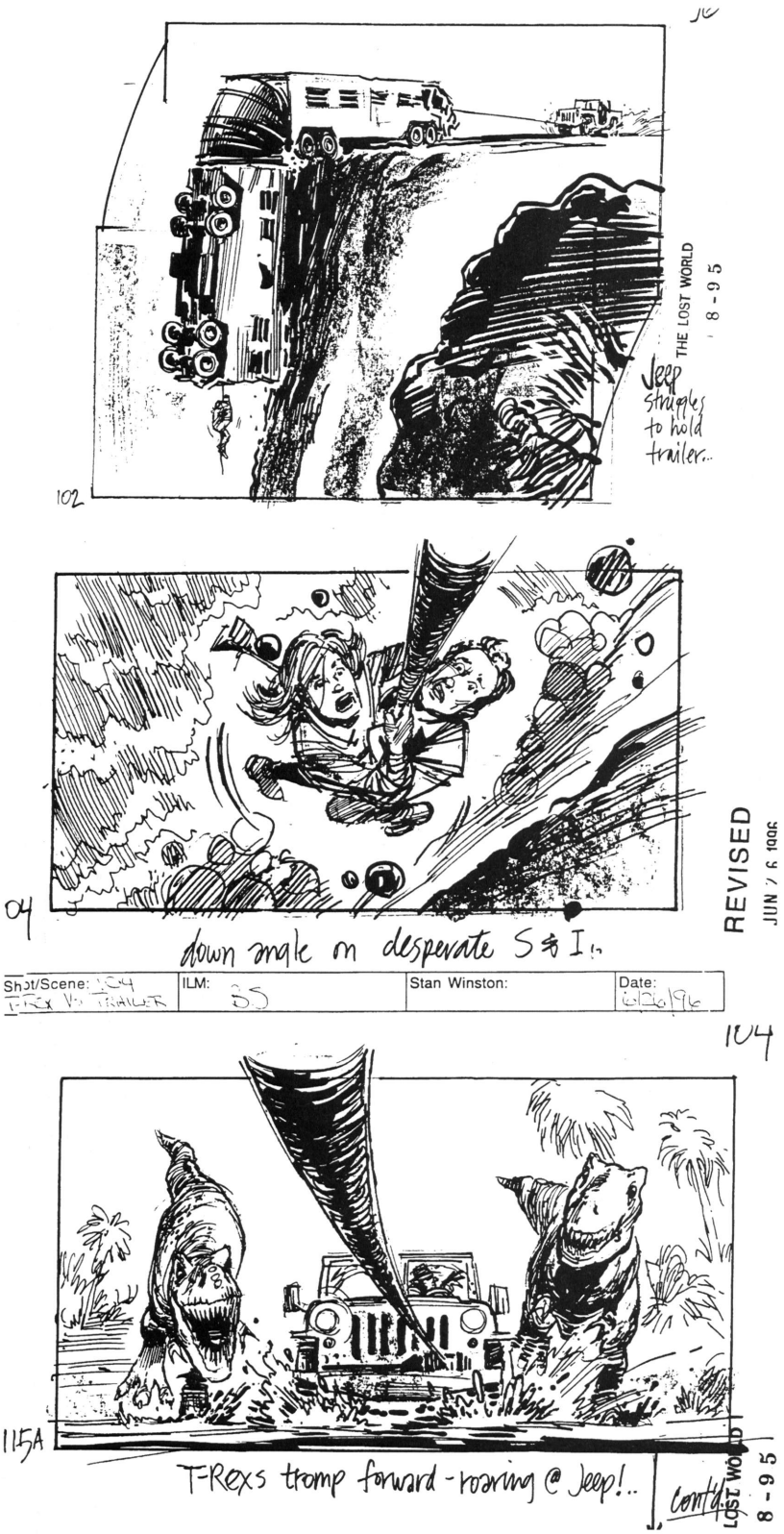
scientists and hunters soon square off against each other. But when the dinosaurs begin to get surly, the two groups of humans must join forces to ensure their own survival.

According to Spielberg, the new film has a more aggressive edge than *Jurassic Park*, a slant that is apparent in the visual style. "There are more 'land sharks' in this movie, and more lives in harm's way," he notes. "In addition, the photography on this film is much more contrasty. From a lighting standpoint, we took a sketchier approach on this film than we did on the last one. On *Jurassic Park*, we let the dinosaurs reflect more light, but on this movie we let them absorb more light."

Accepting the challenge of creating a distinctive photographic style for the film was cinematographer Janusz Kaminski, ASC, who received a slew of accolades, including an Academy Award and an ASC Award nomination, for his superior black-and-white work on *Schindler's List*. Kaminski faced the unenviable task of succeeding director of photography Dean Cundey, ASC, whose smooth integration of traditional camerawork with mechanical effects and computer-generated imagery on *Jurassic Park* earned him the considerable admiration of his peers. Explaining the change, Spielberg says, "I offered the film to Dean first, because I would certainly never pull a sequel away from a great cameraman. Dean has done nine movies that I've either directed or produced, but he was off preparing to direct a picture when I asked him about *The Lost World*.

"After Dean told me he was unavailable, I went straight to Janusz. As a cinematographer, Janusz is not 'one size fits all' — he's much more of a chameleon. He takes the stories he does very seriously, and he marks up the scripts. He tells a cinematography story on top of the writer's or director's story, and he designs the photography according to the beats and measures of the narrative. Because of that, he's going to shoot differently on *Jerry Maguire* than he would on *The Lost World*. Over the course of his career,

***A group of explorers confront an awe-inspiring sight. ILM completed roughly 80 dinosaur shots for* The Lost World, *some 28 more than were featured in* Jurassic Park.**



Storyboards dreamed up by Spielberg and drawn by artist David Lowery detail selected frames from one of the film's major setpieces, in which a pair of T. Rexes attempt to send the scientists' mobile lab over the edge of an oceanside cliff. "I pretty much stage my suspense scenes on the storyboards, and I kind of make those up as I go along," Spielberg explains. "When you look at the storyboards, the scene's either suspenseful or it's not, and if it's not, that's the least expensive way to do a rewrite before you commit it to film. I have my crew members come up to me and tell me whether or not they think a board is suspenseful; if it isn't, it's easy to tweak it by adding shots or changing things around."

Janusz has put together a collection of amazing and completely different looks from picture to picture."

Kaminski's association with Spielberg began shortly after the 1989 airing of *Wildflower*, a Lifetime television movie he shot for actor/director Diane Keaton. His work so impressed Spielberg that the director hired him to shoot the Amblin' television production *Class of '61*, which in turn earned Kaminski the chance to photograph *Schindler's List*. The cinematographer's resumé also includes *The Adventures of Huck Finn, Tall Tale, Little Giants, How to Make an American Quilt* and *Jerry Maguire*. He is currently collaborating with Spielberg on *Amistad*, a historical epic based upon the true story of a 19th-century slave ship rebellion.

The cinematographer says that his priority on *The Lost World* was to come up with a visual approach that would distinguish the film from its predecessor. "*Jurassic Park* was very much like an amusement park ride," Kaminski notes. "The images were brighter, more colorful and more friendly. This film is much more moody and violent. Steven was not in the same frame of mind as he was when he did *Jurassic Park*. His last project was *Schindler's List*, and I think his sensibilities are a bit darker now. *The Lost World* is still a popcorn movie, but it's more of a thriller like *Jaws*. In fact, we used many of the tricks from that movie — for instance, the camera might be locked in on someone's face, and all of a sudden the focus will rack back to a huge dinosaur's head behind them. When the person turns, we then cut back to a shot over the dinosaur to capture the fear in the character's eyes. It's very scary."

In planning the look of *The Lost World*, Spielberg made extensive use of storyboards, which helped him to map out the film's complex action setpieces in a clear, precise manner. "We had almost 1,500 storyboards on this picture," he reveals. "I shot them pretty accurately. I would say that 80 percent of the storyboards are in the movie, but that's mainly because the film is one setpiece after another. You can't wing things like that, because every department needs to know, often months in advance, what to prepare for those shots. For a complicated special effects and mechanical effects movie like *The Lost World*, the storyboards are *a priori*. On a story like *Schindler's List* or *Amistad*, storyboards really get in the way of discovering how to tell the story on a daily basis. I never do storyboards for dramatic

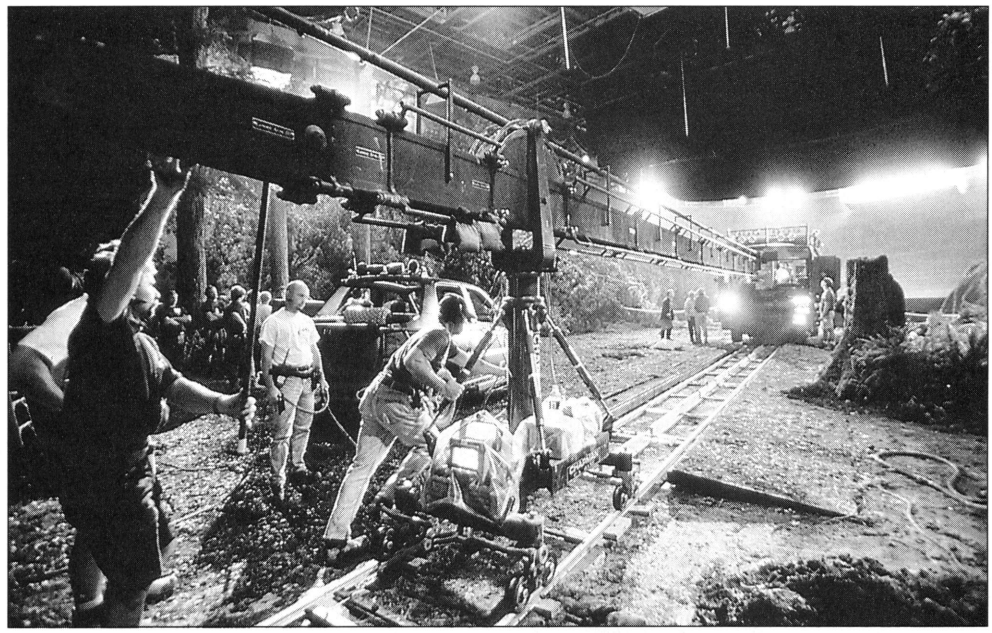
scenes, but I will do storyboards for anything involving action and logistics. When you have a sequence involving stampeding dinosaurs, you have to know where the actors are going before you consult with the effects experts about where to put the dinosaurs."

Although the director found inspiration for the film's style in Sir Arthur Conan Doyle's book *The Lost World,* he also referenced a variety of vintage films for visual cues. "Older movies are always running through my mind," he says. "On this film, my references were things like *King Kong, Godzilla,* a couple of Roger Corman and Alfred Hitchcock films, and a lot of 1950s monster movies, like *The Beast from 20,000 Fathoms, Gorgo,* and all of those other 'chase, crush and devour' films."

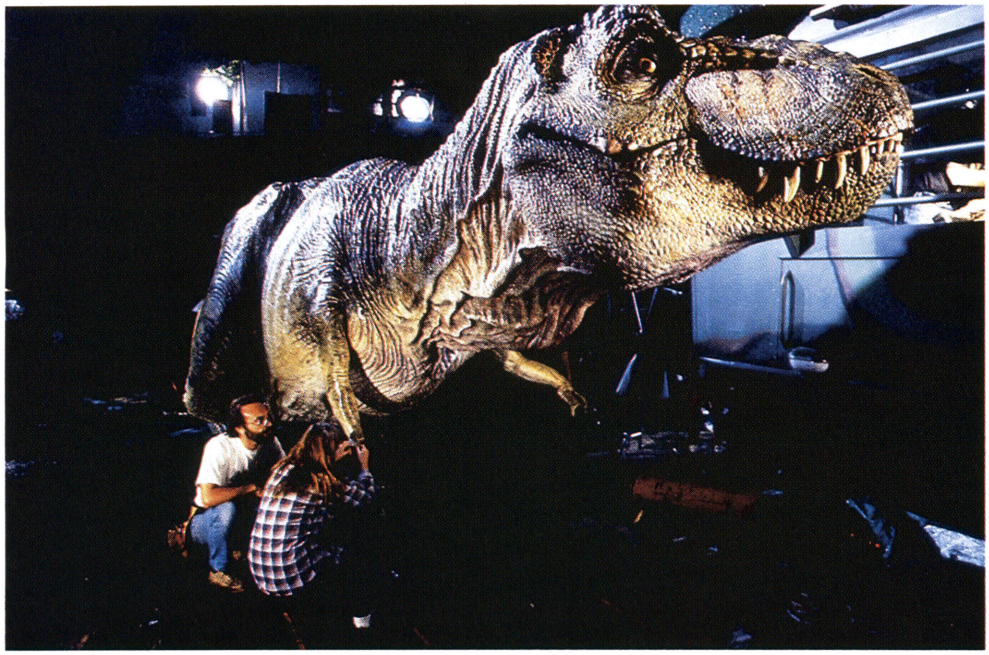
Kaminski says, "Steven said to me at one point, 'I want this to look like an old glossy Hollywood movie, but I don't want it to feel dated.' So that was basically the approach. We did include a lot of homages in the movie, though; there's even one shot of Japanese tourists running in front of a big CGI T. Rex!"

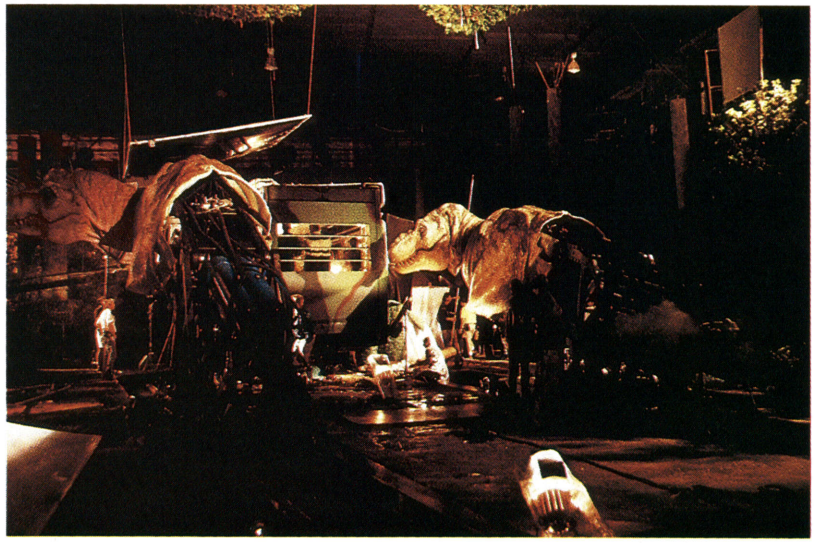
The cinematographer adds, however, that he had some of his own visual references in mind. "*Alien* and *Blade Runner* were the two films I looked at," he says. "The biggest compliment Steven gave me was during the shoot. He came back to the set after doing some cutting, and said to me, 'Man, it's so moody, it looks like *Alien*!'"

The cinematographer began his preproduction planning by sitting down for detailed discussions with ILM visual effects supervisors Dennis Muren, ASC (full-motion dinosaurs) and Michael Lantieri (special dinosaur effects). "It was actually very easy to shoot all of the CGI composites, because the guys at ILM are just amazing with that sort of stuff," Kaminski enthuses. "There were times when we had a flare in the lens, and I would say, 'Dennis, there's some flare there, is that okay?' And he would reply, 'Well, it's never been done before, but let's try it!' We have some shots in the film in which we tilt down from the sun into the ground, where



Above: ***Crew members use a Chapman crane outfitted with a remote head to probe into the scientists' lab during filming of the cliff sequence on Stage 27.*** **Left:** ***Part of the sequence was also filmed at a Universal Studios parking structure. The side of the building was covered with a rocklike facade, and a trailer was hung from a 95-ton crane with the actors suspended below. Says Spielberg, "The biggest headache on this movie was having actors in harnesses hanging for four or five days from the trailer, with rain pouring on top of their heads. It was hard just to get the actors to the point where they were comfortable enough in their harnesses to act, rather than being pinched into submission. That was definitely the toughest scene of the whole film."***





Clockwise from above: ***The film's two animatronic T. Rexes had to be handled with care, as each was capable of generating up to 2G's of force; a hunter is attacked by a group of vicious "compies" (which were filmed at 22fps to create a more realistic sense of motion); a look at the electronic "guts" of the animatronic Rexes; puppeteers prepare to stage a velociraptor's attack on a truck (as seen on the cover of this issue).***

there are some activities going on. All along, Dennis was planning to put in a silhouetted image of a CG dinosaur.

"There were almost no restrictions in terms of what I could do, to the point where occasionally it was much easier to light," he adds. "For example, if I had a big strong backlight on a soundstage, I could flag the light so it wouldn't flare the lens, and later on Dennis would just take the flag out digitally. The man is really a genius."

In regard to the computer-aided effects work, Spielberg submits, "It helped that we were working with a lot of the same people at ILM who had worked on *Jurassic Park*. They really wanted to bring the dinosaurs back to life, but they wanted to make them look even more natural than they did in the first film. Because this film had more action and more CGI dinosaur shots — about 50 percent more than the first film — they were really excited. They weren't so much trying to top the first film, but just trying to do it differently without repeating anything we'd done before."

Spielberg and Kaminski also consulted closely with mechanical creature effects wizard Stan Winston, who created all of the film's frighteningly lifelike animatronic dinosaurs, including a pair of life-sized T. Rexes that cost $1 million apiece. Each of the computer-controlled Rexes required a team of 10 puppeteers to operate, and could generate up to 2G's of force while moving. "We had to find out what kinds of movements the life-sized T. Rexes could do," Kaminski says. "They looked so real that we were scared of them; in fact, they were very powerful animatronic creatures, and we were warned not to get too close to them when they were activated, because if there was a malfunction, they could literally kill someone. The T. Rexes could move very fast, and they were capable of breaking a stage wall. We couldn't use any radios or electronic devices near them either."

Kaminski and camera operator Mitch Dubin conducted a variety of different photographic tests in prep. The cinematographer briefly flirted with the idea of using Deluxe Laboratories' CCE silver-retention process, but explains that ultimately, "I realized that CCE

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PANAVISION

Above: ***For a sequence in which hunters track down dinosaurs in an open field, the filmmakers confronted the problem of shooting high-speed action on very uneven terrain. To solve the dilemma, the crew suspended a Wescam from an Enlouva crane arm and mounted the apparatus on a stripped-down all-terrain vehicle equipped with large shock absorbers. "The combination of the shock absorbers and the gyro-stabilized camera completely eliminated any shakiness," says Kaminski. "The shots came out rock-steady."***
Lower right: ***Even a big-budget blockbuster occasionally benefits from simple techniques. Here, a crew member uses a bounce card to enhance the glow from flashlights held by actors as they march through a field of tall grass.***

wasn't the right process for the movie. Everything was becoming too hard-looking; it would have been a bit too much for the summer thriller audience. We didn't want to scare them *too* much!"

Kaminski also vetted Kodak's new Vision film stocks. "I tested the new Eastman Kodak Vision 320 stock, and the 500 as well. Based on those tests, I shot the film primarily with the 500 ASA 5279 stock. I also used 5293, which is rated at 200 ASA. The Vision stock is amazing. It's virtually grainless, and it has incredible latitude in terms of both over- and underexposures. It holds highlights beautifully.

"Every time I had a situation where I needed a bit more contrast, or when I was doing day interiors, I would use the 93," he continues. "I also used the 93 for the ILM work, because we did some of that on 4-perf. Most of the ILM work was shot with VistaVision, and at that point it doesn't really matter which emulsion you use, because there is no degradation of the negative. But when you're shooting 4-perf and start doing opticals, you can get generation loss. So for that stuff you need a really fine-grain negative. All of my night interiors and exteriors were shot with the 79."

Kaminski's camera package consisted of three Panavision units, including a Platinum and a Panastar. "We also had a Beaumont camera, which is a lightweight 8-perf camera that you can mount on the Steadicam. We used

regular VistaVision for our dolly work or stationary work, and we also had a handheld Arriflex."

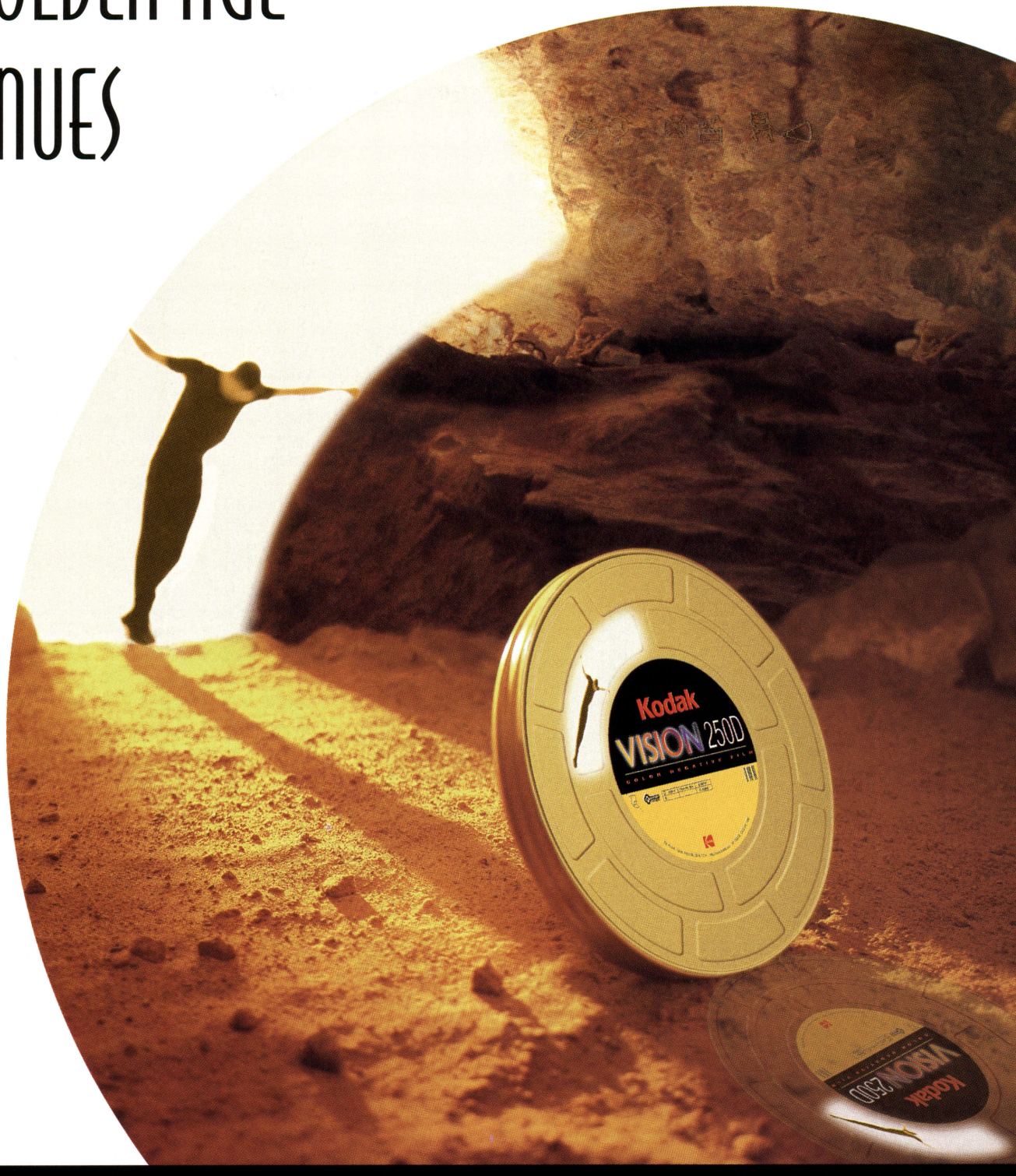
The film was shot in the 1.85:1 format to allow maximum headroom for the dinosaurs. Kaminski says that he photographed the entire film with Primo prime lenses, most often at the wider focal lengths preferred by his director. Spielberg notes, "I like to use wide frames to create suspense — shots where the characters are small and vulnerable in the frame, surrounded by the environment. I also like to have people's backs to the camera. In those types of compositions, the threat presents itself in every possible direction — you never know where something's going to come out of the frame to attack.

"We generally found ourselves either working with the 20mm, 24mm or 29mm lenses, or jumping right to the 85mm or 100mm for shots involving the dinosaurs and their victims," the director adds. "We didn't use the 50mm that much, because I've found that the animals always look better when the focal plane is compressed. When you shoot large animals with wide lenses, their heads are big, but their bodies could be diminished to the vanishing point, and they look kind of puny as they go off into space. It's much scarier when you use longer lenses to compress the people and the vehicles. I did the same thing on the first movie. For example, I used a longer lens to compress the T. Rex and the Ford Explorer with the two kids inside. On this film, I used a similar technique for the scenes involving our twin T. Rexes and any of the intended victims or vehicles."

The Lost World was scheduled to be shot over 72 days, but the filmmakers managed to complete production in just 66. "The pace was so hard that at the end of the week we'd all just hug each other and say, 'Whoa, what just happened to us?'" Kaminski relates with a grin. "There was a lot of energy, but that's the way Steven likes to work, and he brings it to the screen. Personally, I love working that way, but it could sometimes be hard on the focus puller, Steve Meizler, who did a great job despite the constant pressure."

The quick pace was partly due to Spielberg's decision to work without a second unit. "I enjoy doing my own second-unit work, and I mostly try to do that," Spielberg says. "On the *Indiana Jones* films, I always had a second unit that would take my storyboards and shoot portions of chases and things like that. But recently I've found more satisfaction and control in doing my own second-unit footage. When I farm something out to a second-unit director, invariably when I see the dailies I'll like some of the shots, but not others. Then I have to send them back for take two and take three, which costs the company more money. I've found that I can save a lot of money by shooting my own storyboards, because I know what I want and I can

THE GOLDEN AGE CONTINUES



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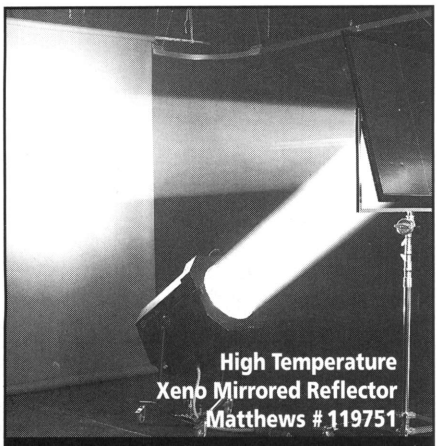

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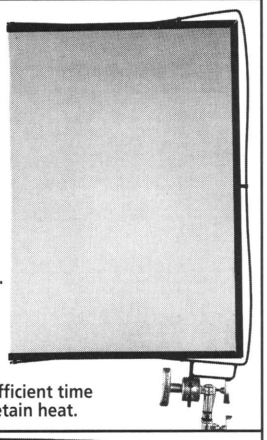

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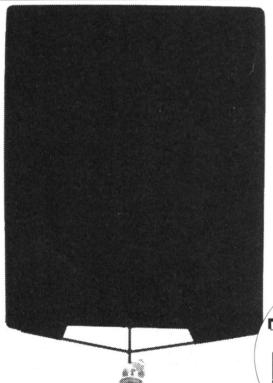

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try to achieve it without going back a second and third time."

The film's logistical complexities necessitated careful planning and organization. Exterior footage was shot on location in Eureka, California, with some additional work at the Pasadena Botanical Gardens. Sets were shot on four soundstages at Universal Studios: Stages 12, 23, 24 and 27. "Stage 12 was where the hunter's camp was built," Kaminski explains. "On Stage 23, we built this big ravine that some characters are chased into by the T. Rexes, as well as a waterfall. Stage 24 was the T. Rex stage, where we had sets that were built around the animatronic dinosaurs. On Stage 27, we had a 'cliff' constructed for a big setpiece in which the scientists' mobile lab is pushed toward the edge by a pair of Rexes."

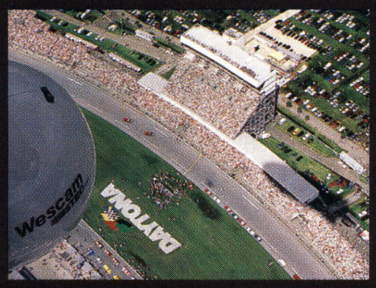
The filmmakers' new approach on *The Lost World* is most clearly evident in the picture's lighting style. While Kaminski did deploy large, soft lighting units for general key and fill, he augmented the look with a variety of more direct sources, including two very rare types of units — a pair of old-fashioned "sun arcs," and a vintage set of T-5 beam projectors. These unusual tools were tracked down with dogged determination by key members of Kaminski's lighting crew. Expert gaffer David Devlin recalls the quest: "We really played a lot of things in backlight, and we used these old sun arcs pretty extensively. We first heard that we were doing the project while we were still working on *Jerry Maguire*, and one day Steven visited us on the set and told us how much he wanted to use sun arcs, which he had previously employed on *1941*. I'd never heard of these lights before; they're old searchlights that were used during World War II, and maybe even before that. They're basically arc units that project a beam similar to what you'd get with a Xenon light, but these use carbon arcs that feed right through the front of the lamp. They also have a mirror made by Bausch & Lomb that's right behind the flame — the quality of the light is beautiful, and the mirror really focuses the beam. It's a very interesting look.

"The problem was that these lights were in extremely short supply. At one time there were 30 or 40 of them, but they slowly died out in America. In the 1950s, movie companies would send them out on location projects like *The Good Earth*, and they'd just mysteriously vanish. I started looking all around for them, and I heard rumors that there were some in China. I even began searching for them on the Internet. Finally, my best boy, Larry Richardson, actually came across a pair of old, decrepit sun arcs at Sony. Steven agreed to have the units refurbished at Universal, and we used both of them on the picture."

Although the sun arcs proved to be effective as backlight sources, their sheer bulk — 275 pounds apiece and 43" in diameter — limited their usefulness in certain situations. This led the filmmakers to hunt down a set of T-5 tungsten beam projectors, which create a strong, searchlight-type beam. The production rented the only set of T-5's existing in the U.S. from ETC, a Hollywood-based manufacturer of theatrical lighting instruments. "The lights once belonged to Universal, but about 10 years ago they sold them to ETC, and they've been kicking themselves ever since!" Devlin states. "We had literally every one of these lights that was available in Hollywood."

The T-5 units proved to be invaluable in a variety of different ways. Says Devlin, "They're a bit like tungsten Xenons, but the look they create is more organic, because they're not computer-designed lamps. A Xenon has a hole in the back of the reflector where the bulb goes through, and you can see where that hole is because the reflector is so well-designed. The result is a beam that can sometimes look a bit like a doughnut. The T-5's utilize a mirror, which is not as precise and creates a smoother beam. In addition, the Xenon uses an arc bulb, which tends to jiggle, whereas these lights have tungsten filaments and a mirror; they create a very steady source with a hard, sunlike punch."

Kaminski and Devlin



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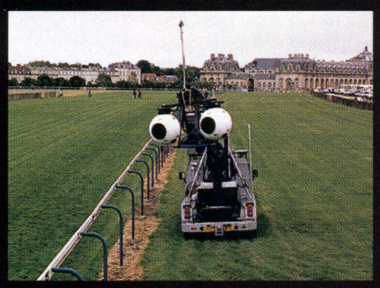

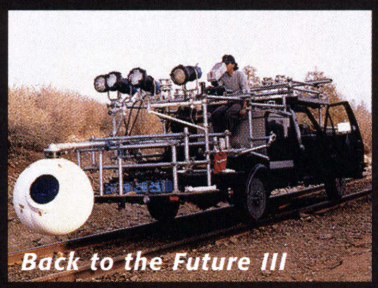

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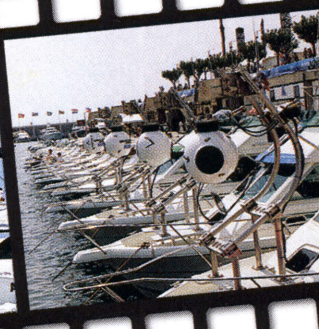

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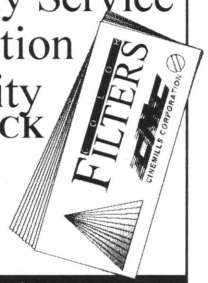

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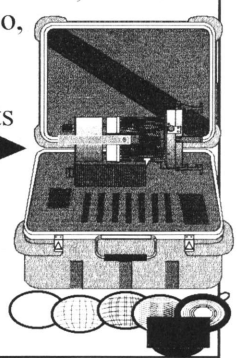
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sometimes used as many as 20-25 of the T-5's while shooting night exteriors. "When we set them up one after another, they gave us a kind of broken pattern of light without using flags or cutters," Devlin explains. "On this film, the camera never stopped moving, which made it difficult to control the light in certain situations, because you can't just use huge flags all the time. That's where the T-5's really saved our skins. You can just set them up in a ring within a stage and sprinkle the light around without having an overall backlight everywhere. The look they created helped to give this film the more gritty feel that Steven and Janusz wanted, and they also allowed us to work really fast, which is the name of the game when you're working with Steven."

Elaborating upon his use of the beam projectors, Kaminski details, "I would stack a batch of them together and use them to outline the T. Rexes. To give the dinosaurs a key light, I used big soft sources. I had these huge softboxes built, which were covered with 12' x 12' sheets of muslin. I would shoot the light off the foamcore and into the muslin to create a beautiful soft source on a large scale. We had built the sets on Stage 24 around the T. Rexes, because we couldn't move the animatronic animals. We had our beam projectors and Dino lights hanging all around the stage, because Steven sometimes likes to change things and shoot from another direction."

Approximately 75 percent of *The Lost World* was shot on soundstages, but both Spielberg and Kaminski prefer location work. Says Spielberg, "If you're looking for reality, it's a lot easier to use God's light and just augment that with HMIs or arcs than it is to create that look 100 percent artificially on a soundstage. No matter how realistic the lighting looks on a soundstage, it still will look like a stage compared to the real thing. Personally, I like to be outside — or in practical interiors — as often as possible."

In creating "natural" environments on stage, Kaminski found himself "constantly making small improvements. I realized a few years ago that when I go on location to shoot night exteriors, I tend to light things a bit brighter to show them off. I light the forests and I light the environments to show that we're on location. I tend to do the same thing on a stage, but in that situation you have to be a lot more careful, because you're photographing an artificially created set. The moment you start lighting things brightly, it starts to look more fake. The lighting ratios are much different on the set than they would be on location. For example, sunny day exteriors are less contrasty on location and more contrasty on stage, because that helps to sell the illusion that you're in a real outdoor environment.

"On Stage 12, I had four Dinos facing each other on both the north and south wall. On the longer east and west walls, I had eight on each side. David Devlin put frames of muslin in front of the Dinos to create the effect of big softboxes, and we shaped the light with flags. So we had these big multiple units all around the stage, and depending upon the angle and direction of the camera, I would turn on the north bank or the south bank. I would get this really beautiful soft backlight. Working with a 500 ASA emulsion, I would get a stop of T2.8. I shot the whole movie at 2.8 because it's a good stop for night exteriors — about 70 percent of the movie takes place at night, in the rain. Depending on the situation, the fill light would be 1.4 or 2, but no more, because at that point it starts to look unrealistic."

Stage 12 served as the site of a major night exterior sequence in which a pair of the scientists sneak into the hunters' camp to cut their fuel lines and punch holes in their vehicles' tires. The sequence involved a large dolly shot which tracked the actors as they crawled under some jeeps, sabotaged the fuel lines, and then crept past the hunters' tents. "As they're going through, one of the lead hunters is staging a big conference with his associates," Kaminski relates. "We worked from the idea that the hunters had brought a lot of equipment with them, including practical fixtures to light their camp. I set up these portable lighting units

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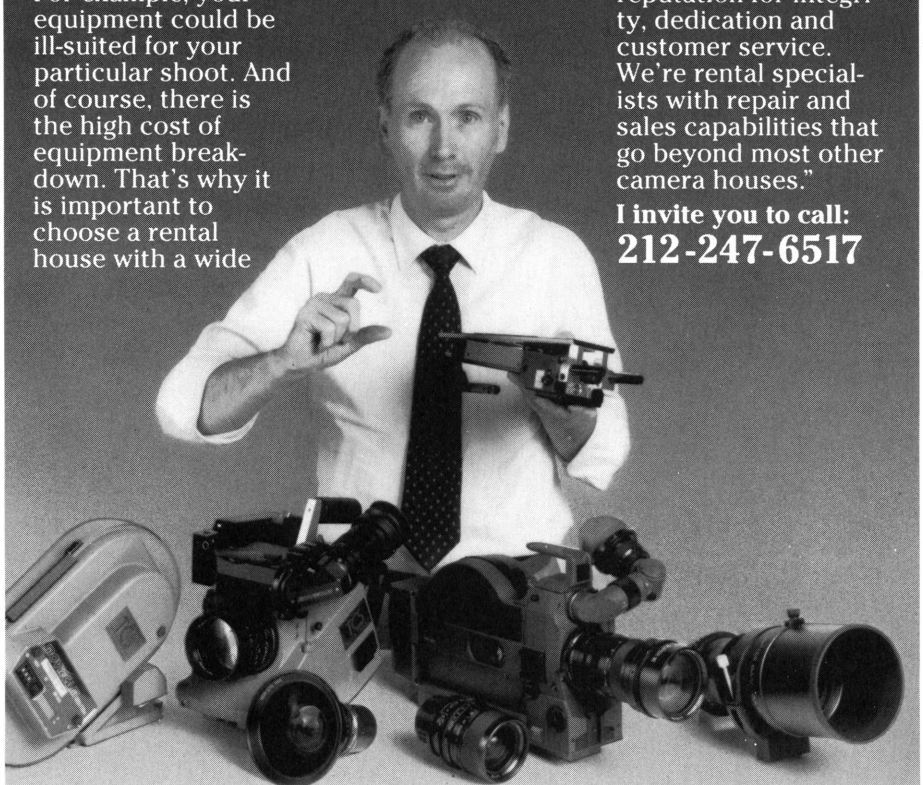

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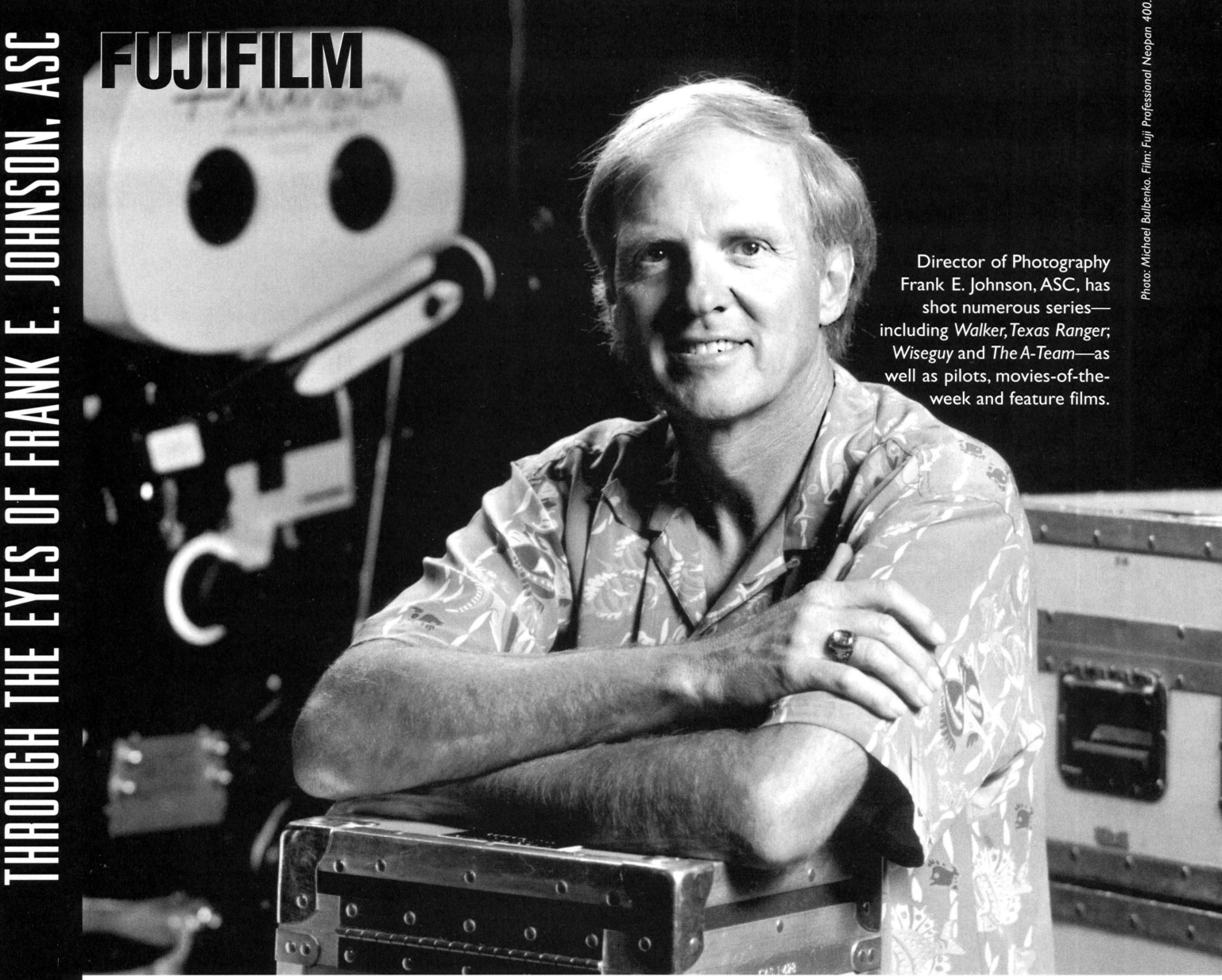
that are often used for highway repair work. Each unit had its own engine, and consisted of four mercury-vapor lights attached to a small arm. I had four of those, and I placed them in four different parts of the stage. I kept them uncorrected to create this very dirty blue tone, and I pointed them straight down to create these ugly spots of light. Then I lit the backing and the trees, and also the tents — I put a bit of warm light in the tents and then backlit them a bit as well. I wet everything down and added a bit of fog, and it started to look very real without being too pretty. I also lit the jeep interiors with fluorescents so we'd have a bit of green light coming from underneath the vehicles."

One of the film's biggest setpieces is a sequence in which a pair of T. Rexes attack the scientists' mobile lab — a pair of equipment-filled camper trailers that are connected by an accordion-shaped rubber umbilical section. As the Rexes batter the two-piece lab, one half of it is pushed over the edge of an oceanside cliff, where it hangs and threatens to pull down the rest of the vehicle. To make matters worse, scientists Sarah Harding and Ian Malcolm find themselves hanging from the dangling end of the lab. A third member of the island expedition attempts to rescue them, but his heroics are jeopardized when the angry Rexes reemerge from the nearby jungle.

Filming of the sequence began on location in Eureka, then continued on Stage 24, Stage 27, and even atop a parking structure at Universal Studios. Shots that involved the trailer and CGI dinosaurs were filmed on Stage 27, while the close-ups of the animatronic dinosaurs were executed on Stage 24. For more shots of the hanging trailer, the crew added a rocky facade to the exterior wall at the Universal parking structure and dangled the trailer from a 95-ton crane; this setup was later duplicated on Stage 27, requiring the production to cut a hole in the stage roof to accommodate the crane.

"We had to shoot that sequence in a variety of different places within one week, using



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different trailers," recalls David Devlin. "In order to keep the lighting continuity, all of the interior lighting of the trailers was duplicated with the help of a computer program designed by the rigging gaffer, Brian Lukas. The inside of the lab is filled with practical lighting, computer screens, ultrasound machines, and so on; as the trailer is smashed, all of these things go off at certain times. Brian's program was controlled with a computerized dimming board, which enabled us to duplicate any circumstance exactly. The result is like a miniature light show inside the trailer."

A long stretch of the scene was filmed in one continuous take with the help of a 26'-long Chapman crane arm outfitted with a remote head, which tracked the scientists' would-be rescuer as he pulls up in a jeep, attaches a rope to a tree, and runs through the trailer to feed the rope down to Harding and Malcolm. "The whole move was very intricate, and it required extreme precision by the crane operator, the focus puller and the actor," Kaminski says. "As the actor was running through the trailer, the camera was following him very fast; if he stopped, the camera would have knocked him over, because we simply didn't have the ability to stop such a heavy piece of equipment instantly. Also, because we were shooting with a 21mm lens, we had the problem of trying to keep the dolly tracks out of the shot. The track was built into the stage, and we built another piece of stage over the track to cover it. As the camera moved, the grips and other crew members cleared the stage parts so the dolly could get through."

The filmmakers confronted a variety of technical difficulties while shooting the trailer sequence. During the continuous crane shot, Kaminski discovered that a piece of electronic equipment inside the trailer was creating interference. "Every time the camera reached a certain part of the trailer, the remote-control focus would slip and lose focus. We had no idea how to fix it, even after about 15 takes. We were about to give up when we decided to try a remote-focus mechanism provided by our Steadicam operator, Chris Haarhoff. We mounted it on the camera, and for some reason it didn't interfere with whatever was happening. All in all, it took us about nine working hours to get three good takes. It was very grueling."

Adding to Kaminski's headaches was the fact that the scene was supposed to take place in pouring rain. "We were constantly pointing the cameras straight up into the rain towers," he recalls with a grimace. "Gallons of water were being poured onto the lens, so we were having problems with the lens fogging and the rain deflectors dying on us. Steven was saying, 'Dammit, this never happened on the first one! We were pointing the cameras straight into the rain, and there were no problems!' I wound up calling Dean Cundey to ask him if he had ever pointed the cameras straight into the rain. He told me, 'No, we were always at a bit of an angle.' The problems were only happening when I was pointing straight up, because there was simply no way to get rid of the water.

> "At one point, Steven said to me, 'Hey man, this is a Cadillac with white trims.' And it truly was — I got anything I wanted in terms of equipment and additional crew."
>
> — Janusz Kaminski, ASC

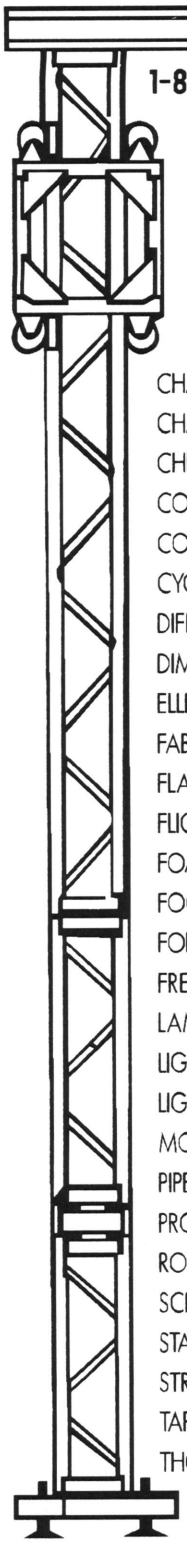
"In terms of the lighting, it helped to put backlight on the rain; if you don't do that, you'll have a hard time seeing it. As the trailer was being pushed toward the edge of the cliff, I lit its interior with bluish-green fluorescent units. It created an interesting effect, because the fog headlights on the trailer were very warm. The strong tungsten backlight that was outlining the edge of the cliff, the trailer and the rain was a little bit bluish; I only used a ¼ blue on the tungsten beam projectors. I didn't want to go too blue and get too clichéd

with the night exteriors. So you've got this slightly blue backlight; a strong bluish-green light coming from the trailer, which is glistening from the backlight; and these warm headlights. It's a very pretty picture, but at the same time it's a very dramatic and suspenseful sequence."

Water again posed a problem during filming of a scene in which several scientists are chased through a ravine by a T. Rex, and must save themselves by taking shelter in a small cave behind a waterfall. The shot was executed on Stage 23 by Steadicam operator Haarhoff. "Chris used the Beaumont camera mounted on his Steadicam," Kaminski says. "He was running in front of the imaginary T. Rex, and in the course of the shot he had to go right through our manmade waterfall, which made the whole thing pretty intricate. The problem was to make the shot without the water affecting the stability of the Steadicam. Michael Lantieri, who is a special effects genius, overcame that difficulty by building a little rainbar that looked like a huge waterfall, even though it was only giving off about a two-millimeter sheet of water. Just as Chris was going through the waterfall, a grip would extend a flag for a split second to cut off the flow. We later did a matching shot where Chris filmed toward the waterfall from inside the cave as the T. Rex's head popped through.

"It was a night sequence, so realistically there should be no light in the cave," Kaminski adds. "But I lit it in a stylized way, with some backlight illuminating the water in a very ominous way. This huge mechanical head then comes through and starts sniffing around. My thinking was that there might be some strong moonlight backlighting the water, which then would create a soft source illuminating the cave. Of course, when the T. Rex's head comes through the water, we were able to get some shafts of very hard light into the cave as well."

Although Spielberg generally uses Steadicam very sparingly on his films, the director estimates that close to 50 percent of



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The Lost World was shot with the stabilization system. "Usually, I'll only do one Steadicam shot per movie," he notes. "In *Schindler's List*, it was the shot that introduces Oskar Schindler in the nightclub at the beginning of the story. I think we used no more than three Steadicam shots in *Jurassic Park*. But *The Lost World* is a movie about chasing and being chased, and there's not enough dolly track in the world for all of the acreage we covered. The Steadicam proved to be a very useful tool."

Equally valuable to the filmmakers were Kino Flo fluorescent fixtures. Kaminski says that his extensive use of fluorescent units represented a new experiment for him. In addition to using them to light the interior of the scientists' lab, the cinematographer found that the Kinos lent an interesting ambience to bigger setups as well. "I'd always wanted to use fluorescent fixtures, but I never had the right movie to do it on," he says. "At first, I was a bit hesitant to use them on *The Lost World*, because I didn't really know *how* to use them. But David Devlin and the key grip, my longtime friend Jim Kwiatkowski, had worked with them on other projects, and they guided me along very nicely. For example, I might set up a fluorescent tube and start flagging it, but David would tell me, 'Don't flag it, because the minute you start flagging a fluorescent tube, you're narrowing the angle of the light and making it a very hard light. Instead of narrowing the angle, take the fixture further back, because the light's falloff is really fast. If you think it's too bright in the background, don't worry about it, because the falloff is immediate, and it falls off into the shadows really nicely.'

"What's interesting about the fluorescents is that they photograph much brighter than the meter tells you. I might be shooting at 2.8, but the meter would tell me that the light was at 1.4. So I'd think, 'Wow, I'm two stops under. How will it look?' But David and Jim would say, 'Don't worry, it'll look great.' And it always did. With tungsten light, if the meter says two stops under, I know it will be two stops under. But fluorescents are different."

David Devlin elaborates: "Because it's a gritty film, we used a lot of cool white and green tubes, but we also used a lot of other colors as well. One great thing about the Kinos was that if we changed our minds about a color, we could just change the type of bulb without losing the output. If you put a lot of red, green or blue gel on a tungsten fixture, it changes everything, including the quality of the light. We could go from a yellow to a 'super blue' or to 'digital green' to a cool white or even a Kino 32 bulb. Again, it's a quicker way to work."

Devlin adds that the Kinos helped the filmmakers add some drama to shots of the big animatronic dinosaurs in motion. "The hardest thing about lighting the dinosaurs was that they were so big," he testifies. "In prep, I didn't realize just how big they were, and what that meant. Just a turn of the head can move it eight or nine feet, so you have to light for more of a distance. In the first film, they would usually put up a big softlight that would carry from one spot to another. But if you use a big softlight, it almost lights things too much, and you can lose some of the drama. On this film, we'd space out Kino Flos and flag them so they would work from position to position during these big moves. Something as subtle as that can make things much more dramatic than if you just have the dinosaur moving through one big, soft light; it moves *into* the light rather than just passing through it."

Looking back on the shoot, Kaminski offers an enthusiastic assessment of his relationship with Spielberg. "Working with Steven is very fulfilling, because he has brilliant ideas and he's always open to input from the people around him," Kaminski says. "In addition, you have the benefit of his stature as a filmmaker, which really helps on a movie this size. At one point, Steven said to me, 'Hey man, this is a Cadillac with white trims.' And it truly was — I got anything I wanted in terms of equipment and additional crew."◆

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Extraterrestrial Escapades

Director of photography Don Peterman, ASC, helps give the term "illegal alien" a humorous twist in the sci-fi comedy *Men in Black*.

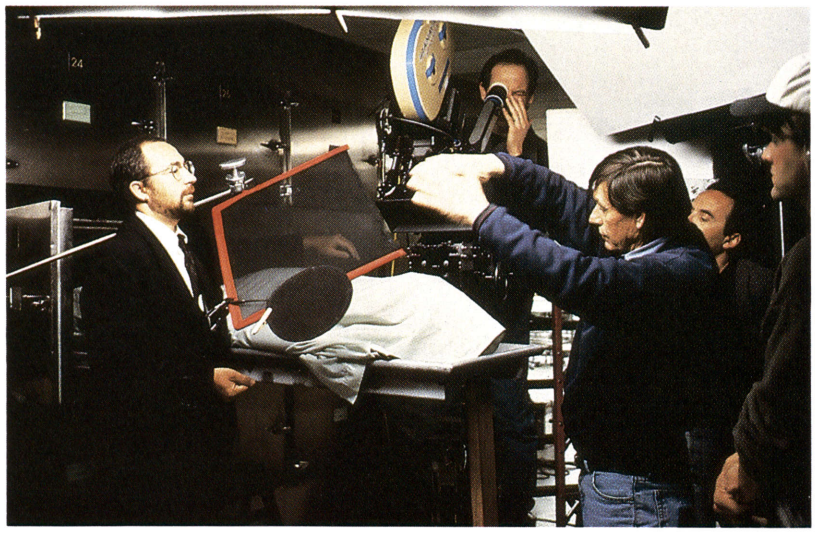
by David E. Williams

Asked to describe his role on director Barry Sonnenfeld's science-fiction farce *Men in Black*, cinematographer Don Peterman, ASC replies with a chuckle, "It was a *big* job." The duo had previously collaborated on the comedies *Addams Family Values* and *Get Shorty*; Peterman was first asked to shoot *MIB* while doing retakes on the latter film in late 1995. Though the cameraman had previously photographed fantastic beings in *Splash*, *Cocoon* and *Star Trek IV: The Voyage Home* (earning himself an Academy Award nomination for *Trek*), *MIB*'s multitude of alien characters would soon make him a virtual expert on xenomorphs.

A native of Hermosa Beach, California, Peterman began his career as a loader and assistant in the opticals department at Cascade Pictures, the same commercial house where special effects pioneers Dennis Muren, ASC and Ken Ralston also got their starts. The cameraman's other feature credits include *Flashdance* (which also earned him an Oscar nomination), *When a Stranger Calls*, *Rich and Famous*, *King of the Mountain*, *Young Doctors in Love*, *Kiss Me Goodbye*, *Best Defense*, *Mass Appeal*, *American Flyer*, *Gung Ho*, *She's Having a Baby*, *Point Break*, *Mr. Saturday Night* and *Planes, Trains and Automobiles*.

Based on the cult comic book *The Men in Black* by Lowell Cunningham, *MIB*'s premise will seem familiar to even occasional viewers of *The X-Files*. Known only by their initials, dark-suited MIB agents K (Tommy Lee Jones) and J (Will Smith) are part of a top-secret Federal bureau that monitors interstellar immigration. Their job: to keep their fellow Earthlings in a blissful state of ignorance by concealing the identities and activities of the nearly 1,500 aliens that live among us — mostly in Manhattan.

While investigating an unauthorized visitation, K and J uncover an intergalactic terrorist plot to destroy the Earth. Their nemesis, known as Edgar when disguised in human form (Vincent D'Onofrio), is actually a three-meter-tall, roachlike insect. The Ray-Ban-wearing duo eventually confront him in a showdown at the now-decrepit site of the 1964 World's Fair in Flushing Meadows, New York.



The picture was complex on both photographic and logistic levels; Peterman had to deal with complicated special effects issues (physical, makeup, mechanical and digital) throughout *MIB*'s 17-week production. The cameraman recalls, "Fortunately, we had a nine-week prep period. We needed that time because there was a lot of New York location shooting scheduled in between our stage work at Sony Pictures in Los Angeles. Naturally, things changed all the time, such as deciding where to shoot certain scenes and where to build the sets. Until we started shooting, we didn't know whether we were going to do the night exteriors on location at Flushing Meadows or on a stage at Sony. We finally wound up building a big set on stage."

In fact, two key exteriors were constructed at Sony: Flushing Meadows and a desert along the

Top: *Agents J (Will Smith) and K (Tommy Lee Jones) are the Men in Black.* Bottom: *Sonnenfeld (left) and Peterman devise a shot while working on the morgue set built in New York City.*

Photos by Melinda Sue Gordon and Andy Schwartz, courtesy of Columbia/TriStar Motion Picture Companies.

An MIB team arrives at the site of an unauthorized encounter. Says Peterman of shooting the desert scene on stage, "When you have a production designer like Bo Welch, you know the set is going to look just like we went out to Palmdale or anywhere else to shoot a desert. You get much more shooting time and it looks the same. We mostly used hard backlight for those scenes — motivated by car headlights and such. We mainly used 5293 4-perf in there, and a bit of VistaVision for a couple of effects shots. We were working from T2.0 to 2.8, with the stock rated at 160 ASA. Overexposing a bit, we printed with our lights at about a 38 to keep the blacks solid."

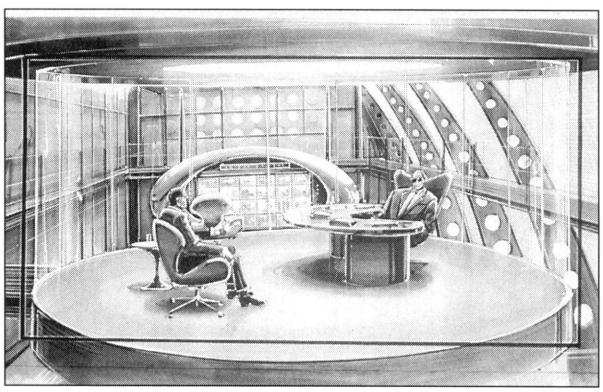
U.S.-Mexico border. "There are so many effects in those scenes that to work in either New York with short nights or out in the real desert would have been impossible," says Peterman. "Starting in March of 1996, we shot the opening desert sequence and the MIB headquarters scenes at Sony. We went to New York in May and finished a lot of night exteriors in Manhattan. Then we then returned to L.A., where we'd also done some exteriors up in Simi Valley, and finished shooting on the Flushing Meadows stage, which we had prepared for while doing location scouting in New York."

Much of Peterman's prep was also spent with visual effects supervisor Eric Brevig of Industrial Light & Magic. "We mostly discussed when to use VistaVision, what stocks to use, and when we could get by just using 4-perf," the cinematographer says. "We also discussed angles, lenses and all that — with Barry working shots out ahead of time so ILM could match our stuff when they got into shooting miniatures and doing other effects work."

Peterman feels that the constraints imposed upon cinematographers by visual effects techniques have lessened radically since he shot the films *Cocoon* and *Star Trek IV*. He recalls, "Way back, when I was at Cascade, I did optical printer lineup and was trained to do effects work. All of that experience is now out the window because of computers, but I understand the concept of compositing layers of images — although I certainly never sought out special effects pictures because of my background. My agent had to talk me into doing *Star Trek IV*, which was a great experience and ultimately helped me in terms of dealing with the types of complex effects we had on this film. There's a certain mindset you have to have on an effects film like *MIB* in order to piece everything together and have a complete image of the film in your head while you're shooting."

Asked if working with Sonnenfeld, who was a highly regarded cinematographer before becoming a director, added an extra degree of difficulty to his work on *MIB*, Peterman offers, "Not at all like you'd think. When Barry asked me to do *Addams Family Values*, he said, 'I don't *have* to get involved with the photography, and I don't *want* to worry about the photography — I've got my own problems as the director.' He is very hands-off as far as the lighting, angles, or anything else is concerned, but he does like to pick the lenses, and they're going to be *wide* lenses. Barry always used wide lenses on the movies he shot, such as *Raising Arizona* and *Blood Simple*. He'll usually choose a 10mm, 14mm or 21mm, and he likes to shoot close-ups with a 27mm.

"Barry's philosophy is that you have to be in *here* with the camera to shoot a close-up," Peterman elaborates, gesturing to within a few feet of his own face. "Otherwise, the shot just doesn't ring true in his head. But of course when you do close-ups with such wide lenses, the subject can never actually look at the other actors. The distortion makes it seem as if they are looking in a completely different direction, which ruins the eyelines. To correct the problem, the cameraman usually puts a little piece of white tape right next to the lens, and the actor has to look at *that* during the shot.



The Modernist-style MIB headquarters was inspired by the work of Finnish architect Eero Saarinen and designed by Welch (illustrations below) to facilitate Peterman's lighting needs. The site of many digital effects shots, the stage had to be lit for 5248 stock so that 4-perf could be used instead of VistaVision. The cameraman needed a T2.8 ½ or better so that the cavernous oblong space wouldn't go soft in the background. The curved lightwall was constructed of plastic tubing covered with 1000H tracing paper, backlit with 40 20Ks.

"But Barry's an ex-cameraman, so we can get into all of that. I get along really well with him personally, I know his style now, and I think his approach has been the right one on all three pictures we've done together. Each is kind of bizarre and throws its comedy right in your face."

During *AC*'s visit to Stage 15 on the Sony Pictures lot, it quickly becomes apparent that something funny (as in *peculiar*) is going on. Constructed within is the centerpiece of the film, the MIB headquarters — a retro-futuristic, airport-like customs area with one long curved wall consisting primarily of brightly backlit material. Dominated at one end by a huge, *Jetsons*esque oval viewscreen, the immense oblong room is filled with decidedly unearthly things. Strange, chrome-plated instruments and weapons line special cubicles; one corner is filled with a voluminous glass container holding an overgrown brain floating passively in green-tinted fluid; on the far side, a pair of multi-limbed octopoid creatures operate twin control consoles.

Fortunately, Peterman soon arrives to make sense of it all. "A lot of our prep period consisted of meetings on the rigging for this and our other two main sets," he says, leading the way out and around the structure. This stroll reveals an elaborate latticework of pipe scaffolding and 20K fixtures behind the room's translucent wall, which essentially makes the MIB complex a giant softbox. "We have 300 lights on this set alone, because we lit it for Kodak's 5248 stock. There are a lot of digital effects that will be added later, but with that stock, we could shoot in 4-perf with our Panavision cameras for most of the work in here instead of going to VistaVision." Both the Panaflex and Beaumont VistaVision cameras were operated by Stephen St. John, who also served as Steadicam operator on the show.

"Because of the depth of the headquarters set, we needed at least a T2.8 ½ so the background detail wouldn't go mushy," Peter-

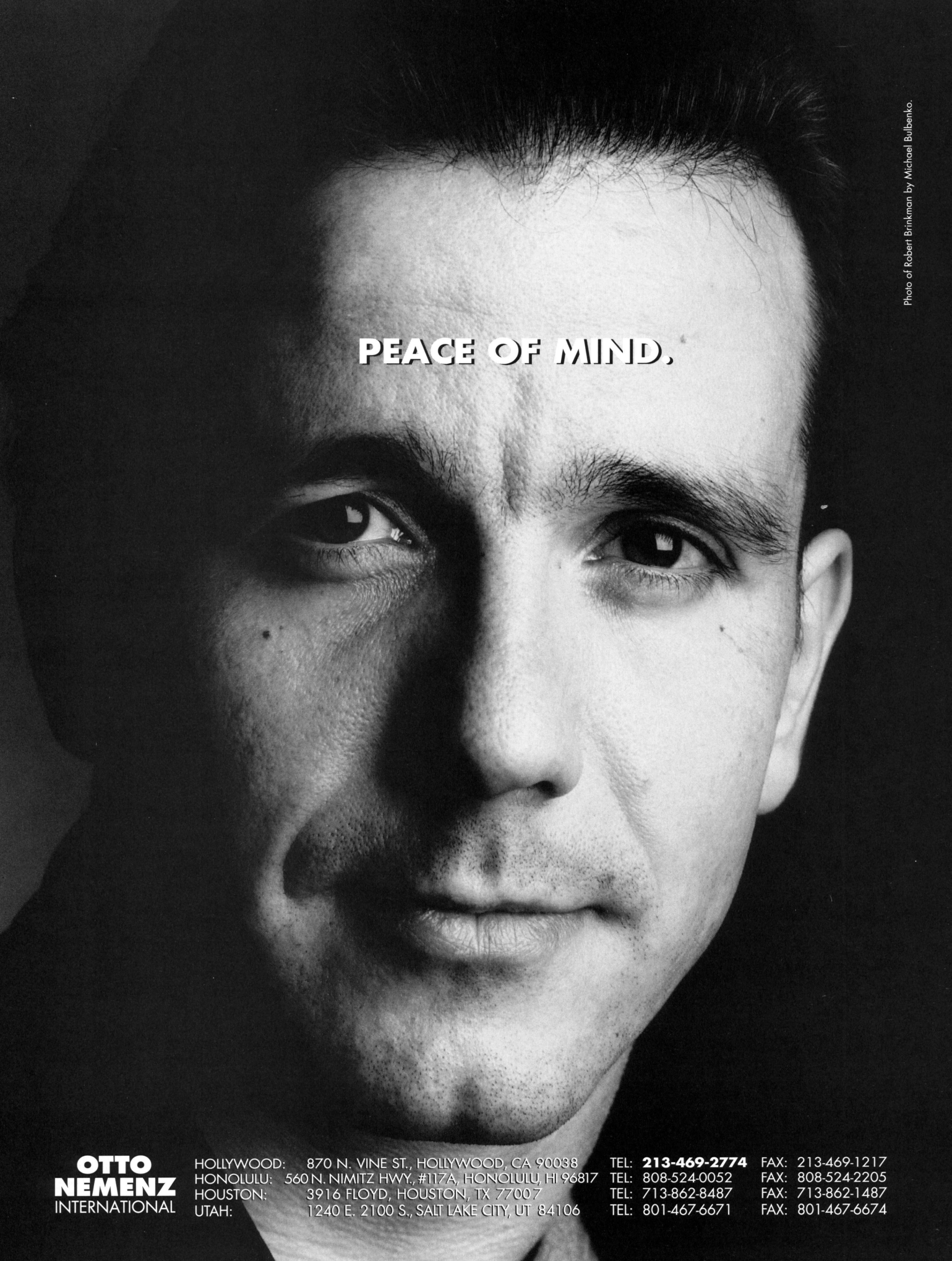


Photo of Robert Brinkman by Michael Bulbenko.

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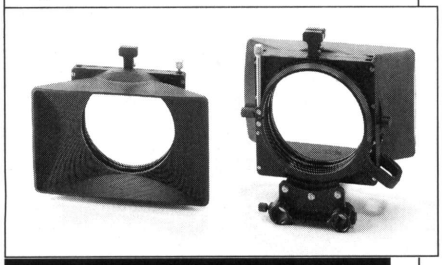

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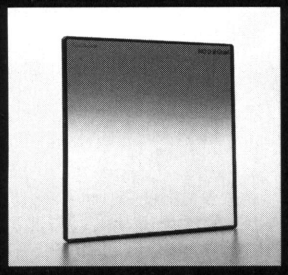

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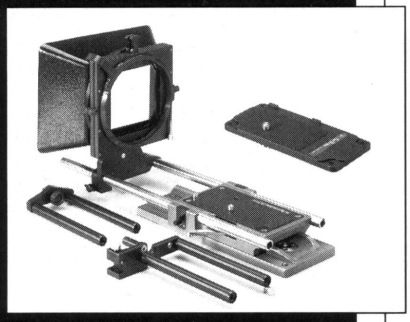

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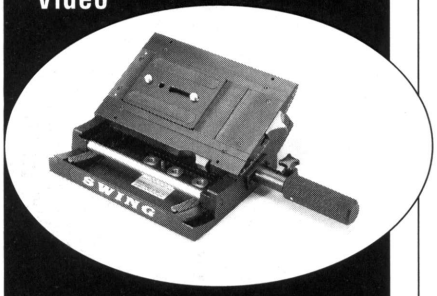

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man adds. "Shooting with 100 ASA stock, which I was rating at 80, I spent a lot of time with my gaffer, Jeff Murrell, and the electricians figuring out how to use enough light to get that stop without burning the place up." This requirement, coupled with Sonnenfeld's penchant for both wide lenses and a 1.85:1 frame, also led the cameraman to integrate lighting into the set whenever possible.

The MIB headquarters was contrived by production designer Bo Welch, whose credits include *Beetlejuice, Ghostbusters II, Edward Scissorhands, Batman Returns* and *Wolf*. "The script had some background about the Men in Black organization, which was supposedly formed in the 1960s," says Welch, who has since moved on to design the political satire *Primary Colors*. "I suggested to Barry that their headquarters should be sort of an Ellis Island for aliens, as designed by a prominent architect — who then had his memory conveniently erased."

Toward that end, Welch studied the work of Finnish architect Eero Saarinen, the designer of TWA's terminal at New York's John F. Kennedy Airport. "The vocabulary of shapes and materials that Saarinen used evoke a sense of space travel and an unbridled optimism about the future," Welch offers. "It would have been too obvious and clichéd to make the set shadowy and dark. I saw the Men in Black headquarters as a central, bureaucratic office; all of the government offices I've ever been in are places where you can *see* things. People *work* there. So my first idea was to create a sterile, clutter-free space and integrate this enormous lightwall into the design. Both people and the aliens would stand out well against that kind of background. It was also interesting to have a set that was nearly prelit with the flick of a switch."

Home to the cynical, cloistered MIB, Welch's open, almost playful design also adds yet another touch of ironic humor to the picture. Peterman explains, "We covered the lightwall with 1000H tracing paper, which is pretty thick, but the light coming through is a lot softer. I didn't want any shadows on the wall. I wanted it to burn out, so when people walked in front of it they'd become silhouettes. So while I used fill and other lighting effects in different parts of the set, the whole room was basically lit through this one wall."

Due to the intensity of the light coming through the paper, however, additional steps had to be taken while shooting with the wall behind the camera in order to avoid any flattening. Explains Peterman, "I usually backlit the actors to create a rim on them, cut the front down, and then cheated them a little bit so they wouldn't be so flat. That was the biggest obstacle. I also had trouble with the big pieces of stainless steel and chrome detail built into the set. They kept flaring out, so we had to do a lot of dodging with black 12' x 12's to dull them down and keep the light from blasting back into the lens."

This overall lighting approach also generated a substantial amount of heat on the set. As Peterman relates, "We had about 40 20Ks hitting that paper on the wall, which can get us up to about 160°F in the ceiling area. That caused the sprinklers to go off once when we were pre-lighting, but it wasn't a disaster. We ended up putting some fans up there. The only other problem we had was that Bo made the framework for the wall with this plastic tubing, which we put our paper over. Well, the heat can cause the tubes to warp a bit, but we were able to fix that at night when necessary.

"Working with Bo is great because he creates opportunities so you can figure out what kind of lighting will work best," Peterman attests. "The lighting he imagined is very graphic, using certain shapes throughout the set. For example, there are a couple of scenes where the characters are walking down these long hallways. The lighting is built into the set as circles and lines. It's an architectural lighting dream. The halls have these 8'-wide circular skylights cut into the ceiling every 10 feet, but Bo only gave them an 8' ceiling, so these lights are right on top of the actors. Spaced out properly, they add depth and drama as people walk through them. We

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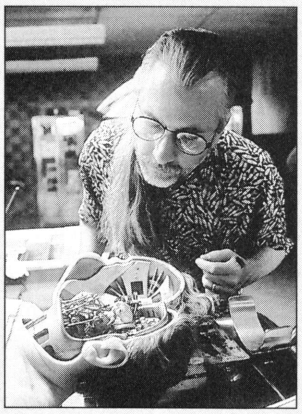
Creating *MIB*'s Eclectic Array of Aliens

Men in Black's multitude of otherworldly species was realized by ace makeup effects artist Rick Baker, a recent Academy Award winner for his efforts on *The Nutty Professor*. But unlike his very human (if exaggerated) creations for that picture, *MIB* recalls Baker's spectacular creature work in such films as *An American Werewolf in London*, *Harry and The Hendersons* and *Gremlins 2*. In all, the artist and his company, Cinovation, created nearly a dozen distinctly different aliens for *MIB*, using every method available: prosthetics, rubber suits, animatronics and huge mechanical puppets.

Baker presented hundreds of alien designs to director Barry Sonnenfeld, executive producer Steven Spielberg, and producers Walter F. Parkes and Laurie MacDonald, often recombining various elements to concoct something that satisfied everyone. As Baker relates, "They rarely agreed with each other, so there was a lot of mixing and matching going on, such as, 'Steven really likes the neck on drawing A, Barry likes the feet on 3C, and Walter likes the torso on D15, so draw one that looks like that.'"

Regularly relying upon logic and extrapolations from real-life nature to design his effects, Baker sometimes found himself at creative odds with Sonnenfeld's wry take on the film's extraterrestrial-oriented comedy bits. One example is a scene involving Mikey, an extraterrestrial "illegal alien," who attempts to sneak across the U.S.-Mexico border. The humorous slant is that Mikey has simply concealed himself under a poncho, with a highly articulated fake human head protruding out of the neck hole, in his attempt to pass for a typical, if somewhat misshapen, Earthling.

In reality, Mikey was portrayed by an actor in a sophisticated animatronic costume wearing leg and arm extensions, with three interchangeable mechanical heads offering a wide range of movement. However, as Baker explains, "The character was played by a real person until the MIB agents rip the poncho off him and reveal that it's really an alien holding this head on a stick. We made a replica of the head of the actor who played Mikey as a human. It which was radio-controlled and as realistic as we could make it, but it just had a stick coming out of the bottom.



"Barry said he wanted Mikey's disguise to be crude, and I said, 'Well, then why isn't the head crude? It should look more like a ventriloquist's dummy." But Barry said, 'No, I want the head to look perfectly real, but I want just a stick coming out the bottom.' And I kept arguing the logic of this. I said, 'Instead of a stick, why don't we have a control apparatus with levers worked by this weird froglike hand so you could see how the head was controlled?' 'No, no, no, I don't want that.' 'What if there were wires coming out of the head that plugged into the belt of the alien wearing it and you could assume he controlled it that way?' 'No, no, no — I want a stick with a head on it!' I just thought it was weird."

One of Baker's most unique characters for *MIB* was Edgar (Vincent D'Onofrio), a 12' space bug hidden inside a human skin who undergoes a progressive deterioration throughout the course of the film. "I don't know how the alien fits inside," admits Baker, "but we went for this ill-fitting look, as if this dead human skin was stretched over a form that wasn't right. In the script, they had him adjust his neck a little bit to smooth the skin out, but I thought it would be cooler if he grabbed onto the back of his scalp and stretched his face really tight against this alien form underneath. So we went from this droopy, baggy, weird face to this really tight, stretched-out face."

Baker's concept could only work with the cooperation of a very patient actor. Thankfully, D'Onofrio allowed the makeup maestro to pull and push his skin in countless uncomfortable ways before applying the prosthetics, so he could then stretch the makeup to the max. Baker explains, "A silicon gel-filled appliance was glued to his face and ran to the top of his head, where he could actually grab it and physically distort his face into something that was quite hideous."

Baker also created two animatronic talking versions of Edgar in giant bug form, but script rewrites demanded that the creature fight the MIB rather than discourse with them. "Edgar was one of those designs we went on and on with," Baker says with a sigh. "I don't know how many drawings we did, but the design they eventually approved was a real mix-and-match hodgepodge of 47 other drawings. I thought it looked like something that would never live and didn't deserve to!

"When the Edgar bug finally came out of Vincent D'Onofrio, he had lengthy dialogue to deliver with this ridiculous bug mouth, so we built two

Top: ***Mikey wields his head-on-a-stick. Notes Peterman, "Rick Baker liked to make the aliens shiny, which I love because they really catch the light and seem more alive."***
Bottom: ***Baker with a "human" whose face opens, revealing a tiny alien who "drives" the being. "We did a fantastic likeness head of the actor, which actually opened up," he reveals. "For close-ups, we built a scaled-up version of the inside of the head with a large articulated alien puppet working the levers."***

big mechanical bugs that talked. I kept saying, 'It's going to be ridiculous when we hear a normal human voice coming out of this giant bug monster, but they said, 'No, no, he has to talk!'"

Somehow, that notion changed before any scenes involving Baker's mechanical puppets were shot. "Movies are ever-evolving things," he notes philosophically. "Unfortunately, the way they make films these days, they get a release date and then constantly rewrite the script through the course of making the movie. Meanwhile, we have start designing and building our stuff in preproduction because it takes a lot of time to do right. The night before we were going to shoot the scene with Edgar, they rewrote the scene again. At that point, Barry said to me, 'I don't think we're going to use this.' I was quite disappointed. But I'm sure it was ultimately the right decision for the film."

Baker's Edgar design ultimately became a 3-D template for animators at Industrial Light & Magic, who cyberscanned a scaled-down maquette of the bug-like beast for their CG model. ILM also created a CG Mikey for one shot in which he "attacks" U.S. Border Patrol guards.

The last-minute addition of a sequence depicting newly arrived extraterrestrials checking in at the Men in Black headquarters also forced Baker to do something he'd never done before: subcontract. He hired Steve Johnson, Bart Mixon and KNB Effects to flesh out the scene with seven additional creatures. "I felt that there needed to be something like the *Star Wars* cantina scene, because the story explains that there are hundreds of these aliens on Earth," Baker remembers. "Unfortunately, the scene's a throwaway and it never became what I'd imagined. There were probably 10 aliens, but you see maybe six of 'em."

Despite the disappointments, Baker concludes, "What I really enjoyed about *Men in Black* is that we did at least one creature with just about every technique I've ever used."

— Ron Magid

covered the openings with muslin and then backlit them, which created these glowing soft circles.

"Bo then had these lines of fluorescent tubes built in the walls, just along the floor, which added to the sense of perspective."

Says Welch, "It's incredibly important to integrate lighting into the design of any set, and Don was the first person I asked about certain ideas to see if they were beneficial, good-looking and doable. Those circular skylights also carried over the circle motif that I used throughout the set and the rest of the film. Circles are very futuristic and suggest all kinds of things. I really wanted the audience to imagine those skylights to be flying saucers zooming over people's heads as they walked through those corridors."

This motif was echoed throughout the various sets built to create the MIB lair, including a small room in which new recruits are tested by the agency's gruff chief (see photo on page 64). Again, the ceiling featured circular skylight openings but "instead of the muslin and diffused light, we used very hard light. From up high above the openings, I used super-hard Fresnels, so the shafts project down to make these hot, crisp-edged pools. I might have liked the effect better if they were little hotter, but to get each pool to overexpose further I'd lose some control because the lights would have to be up higher and be so much brighter. Also, because we had 25 or 30 of these circles to do, it was impossible to overexpose that much. There was just too much ambient light.

Noting the main hall's cool, institutional lighting, Peterman says, "We started out with it looking much colder. But Barry isn't really big on blue and neither am I. It's been overused and is becoming kind of a cliché. We did some tests and decided to up warm it up in the printing stage. I didn't want to have to change the gels on all of these lights! But the cool feeling is also appropriate for the room — it's a government workplace.

"To create some contrast, we also have these little halogen desk lights that we bring up really high. They're so hot that we can only turn them on just before we roll. They're about 3200°K, while the rest of the room is around 3600°K. I tried to get them about two stops over, to roughly T5.6, because I wanted the color to change on the desks, spilling onto the wardrobe and the hands of the people sitting there."

In the end, Welch and Peterman's approach to the MIB headquarters set helped keep the production on schedule. "We didn't spend a lot of time relight-

The Flushing Meadows set on Stage 27 at Sony. Says Peterman, "Barry likes wide lenses, so we had to put the lighting up high and then tease it down. The lighting was all done with HMIs because I wanted it to be somewhat cold, but I used ½ or ¼ CTO on our 18Ks and 12Ks, which brought them up to about 3900° K. If I'd used tungsten lights, I'd have nothing coming out of them by the time I gelled them down. I also had four 30' x 40' boxes made, with all-black walls and rigged with 5Ks and 10Ks, for ambience. They were on dimmers and hydraulics, so we could tip them in any direction."

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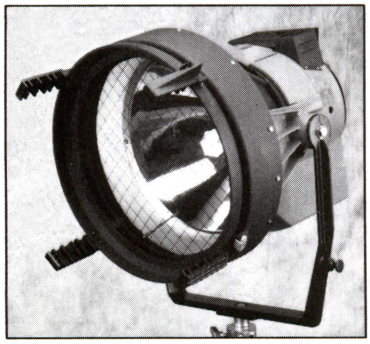
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Recruits are tested by the MIB's crusty chief (Rip Torn). To create the crisp pools of light, Peterman "directed hard Fresnels right through these circular holes Bo Welch built into the ceiling. We lit the whole scene from those."

ing," he says. "And that's what Barry wanted. We tied up a lot of lights, but he also spent a lot of time on the set floor in order to get it smooth enough for us to dolly without having to lay down track. I had to make a lot of lighting decisions before the action was blocked out, but if we'd walked in here cold and tried to light this whole set, especially using such wide lenses, we'd never have gotten through it."

Interestingly, the Modernist themes found in the MIB headquarters and other sets designed by Welch were later echoed in location work shot at the conical Guggenheim Museum in Manhattan. The production designer remarks, "The Guggenheim has the same architectural vocabulary we had already been dealing with; it looks almost like a *stack* of spaceships. I had been looking at it since day one, trying to figure out how it could be worked into the film. In my opinion, movies that have a visual consistency are more successful, and I thought that shooting there would definitely help create that feeling."

"There were tremendous restrictions at the museum, however," Peterman recounts. "They had an exhibit going on, so they wanted to know everything about our lights, particularly how much UV light HMIs throw out. We couldn't even put lights on certain floors. We ended up primarily using fluorescents, which they loved, and prerigged it all the day before the shoot.

"The Guggenheim is basically a giant incline spiral. In the scene we shot there, Will Smith runs from the ground floor to the roof, with two cameras looking straight down the center from the top — starting with a 10mm and going longer for tight shots. We attached Optima 32 tubes to the bottom of the railing, which is this solid wall to the left side of the ramp, so Will was underlit all the way up. Then I turned on their house lights and just bounced some more light off the ceiling. It's all just ambience, but the interior is entirely white and we could shoot with 5293, so we had about a T2. It's a wonderful building, so it looks great, but we were only in there for about an hour."

The Guggenheim's roof was also used in the sequence, with its permanent lighting (uncorrected fluorescents) primarily illuminating the scene, augmented by ball-shaped practical lamps.

Peterman found that another time-saver was to have very close ties to his second unit, which also kept *MIB*'s visual style consistent. As he explains, "Keith Peterman shot second unit for me on *Addams Family Values;* over the course that film's 128 days of production, we developed a system in

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which his crew would come in immediately after we got through, and shoot all night on the same sets with the same lighting. So not only would there be continuity in the lighting between shots, but we didn't have to reorder lights. I used Keith again on *MIB*, and it really helped." Operating for Keith Peterman was Greg Smith.

The second unit also ran a live video feed to the first unit site so that Sonnenfeld and Peterman could have direct input on each setup if necessary. "That way, we got a much better match than if they'd had to come back a month later to try to re-create something we'd done," says the cinematographer. "Of course, Keith knows how to light the way I do. In addition, Eric Brevig directed a lot of the second-unit footage, and Barry and I had discussed a lot of that with him in prep.

"With our schedule, we would have been dead if we hadn't had a full-time second unit. But it worked so well that we were soon about four or five days ahead by the end of the first L.A. portion of the shoot. That was killing Bo Welch, because he wasn't ready for us to go in on some sets. We had his crew working overtime because we were catching up to them. But we fell behind again by going to New York, due to the short nights with the weather."

The intense, sharp-edged lighting seen in the MIB headquarters set exemplifies the film's overall clean photographic style, though Sonnenfeld also sought a gritty *French Connection*-with-aliens feel for certain sequences shot in Soho and in New York's meat-packing district. As Peterman says, "To get that crispness, we've generally used Ultraspeed or regular Primo lenses and very little diffusion, although I have used a little bit on the actors. We also want to make the film contrasty, with very deep blacks, so I'm overexposing a bit and printing it down.

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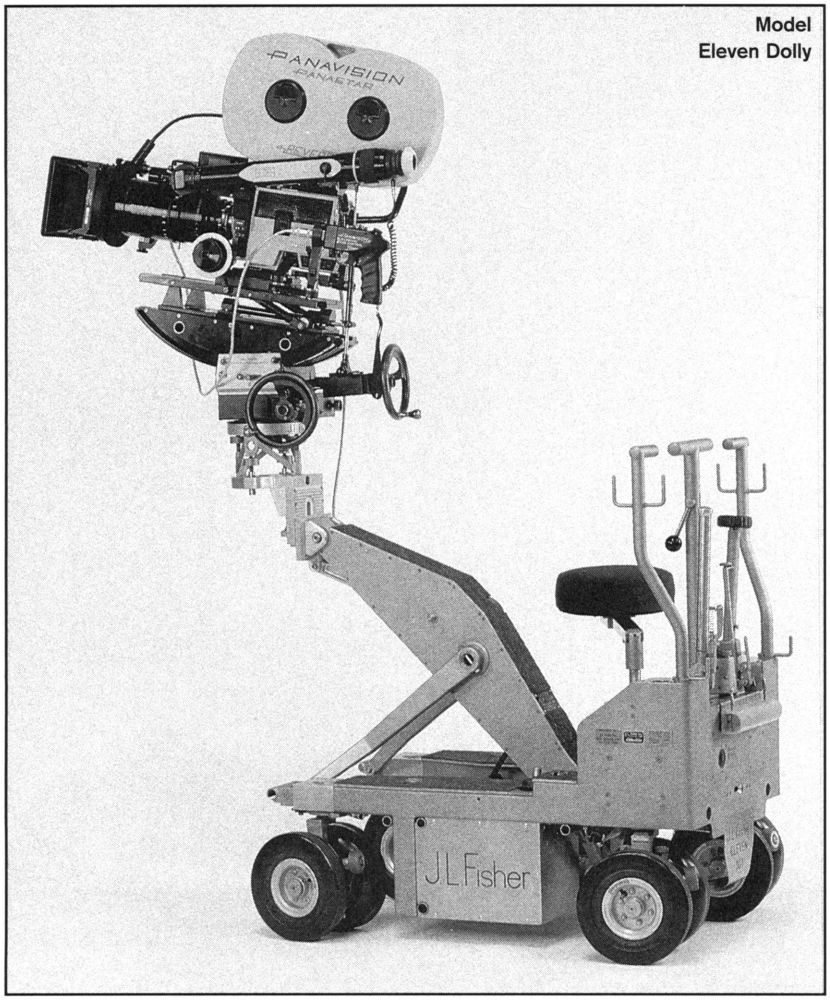

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the headquarters set to just a few colors — black, gray, white and flesh tones."

MIB's final timing and release prints were slated to be done at Technicolor (under the supervision of Bob Putynkowski), and Peterman's New York footage was processed at DuArt. But the cinematographer specifically requested that his dailies for the Los Angeles portion of the shoot be done at CFI. "I feel I have control there because I've built up a relationship with Art Tostado and timer Ron Scott," says the cinematographer. "When I finish shooting each night, I can call Ron up and explain what my lighting situation was and whether I want something a little warmer or colder."

Summing up his experience on *Men in Black*, the director of photography offers, "Because of the slow stock and amount of light we were using, the headquarters set was definitely one of the most challenging interiors I've ever done. Since my very first film, *When a Stranger Calls*, I've usually been [more of a low-key minimalist] in terms of lighting. I shot that one with nothing — strictly Sun Guns and bounce cards at T1.4. Once your eye gets used to looking at things that way over the years, it becomes tough to do the kind of high-key lighting we did on this film. It really makes me admire people like Gregg Toland [ASC] and Robert Surtees [ASC], who used to shoot films all the time with stock that was rated in the range of 16 ASA. Looking at films like *Citizen Kane* or *The Bad and The Beautiful*, you sometimes have to wonder how they did it."

Peterman is currently off shooting the Disney feature *Mighty Joe Young*, directed by Ron Underwood. A contemporary remake of the 1948 great-ape film, which relied on Willis O'Brian's stop-motion animation techniques to bring its eponymous gorilla to life, this new picture's simian co-star will be realized with animatronics by expert creature-builder Rick Baker. Shot on the Hawaiian islands of Oahu and Kauai and in L.A., the picture is scheduled to be released in the summer of 1998. ◆

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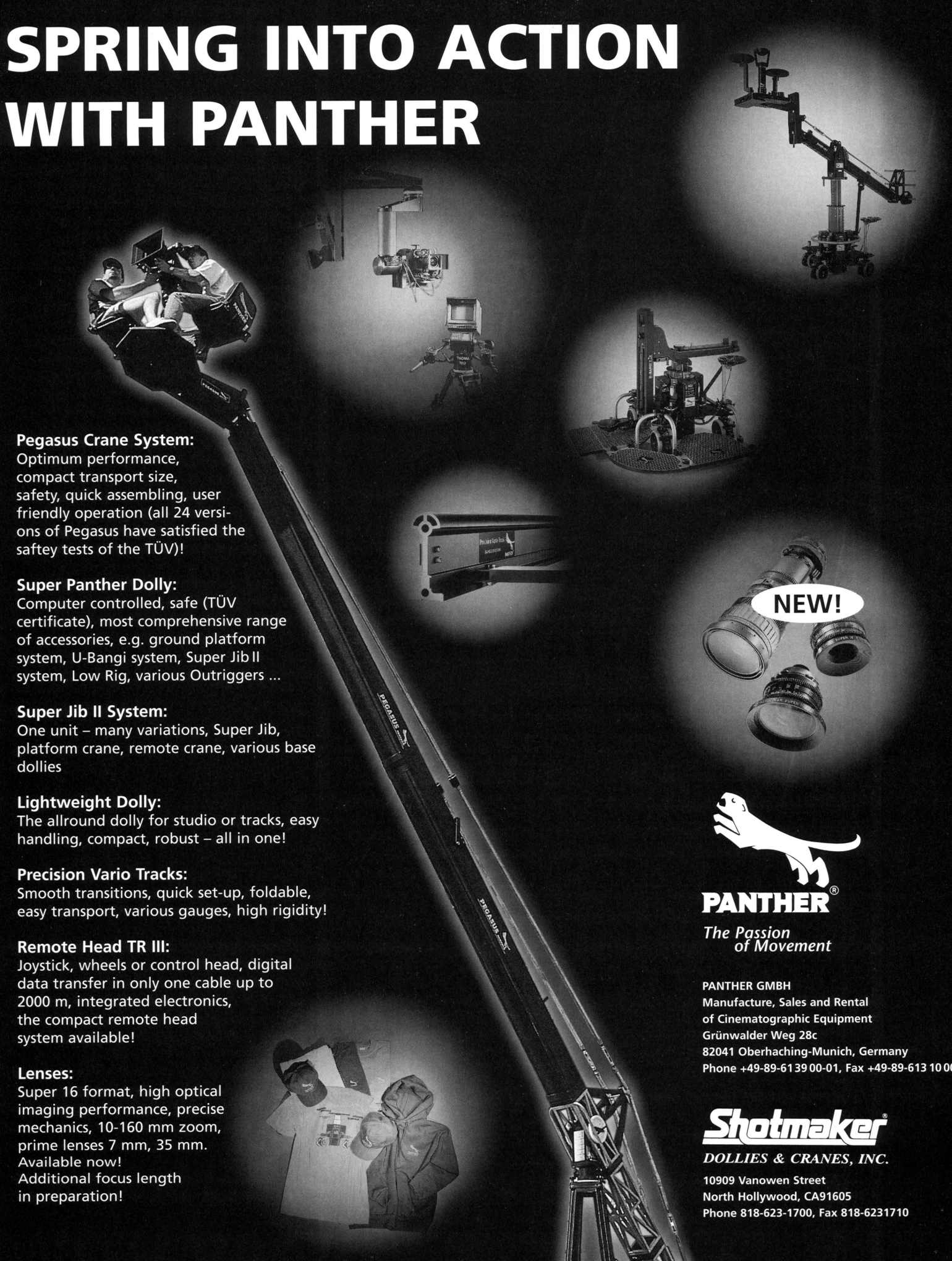

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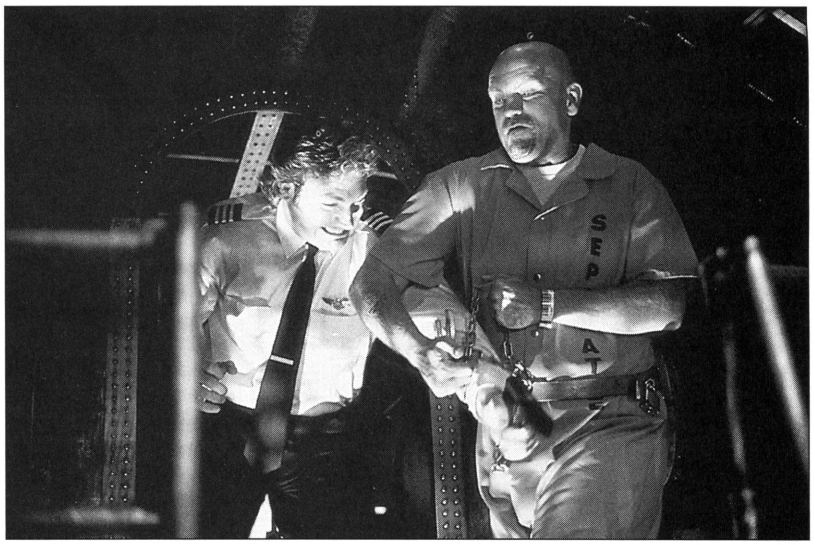


Flying the Unfriendly Skies

Director Simon West and cinematographer David Tattersall, BSC take wing in *Con Air.*

by Eric Rudolph

The premise of *Con Air* is enough to discourage the hardiest of frequent flyers.

The $80 million anamorphic action extravaganza begins as prison parolee Cameron Poe (Nicholas Cage) is about to be flown to freedom. He's just served an eight-year sentence for a self-defense slaying which he committed following his heroic return from Operation Desert Storm.

Fate, however, lands the Gulf War veteran aboard a prison transport plane full of the most heinous reprobates imaginable. Once airborne, the convicts commandeer the flying prison. Spearheading this revolt is Cyrus "The Virus" Grissom (John Malkovich), a criminal genius who has devised the hijacking plot in order to win freedom for another passenger — the son of a notorious drug lord — in exchange for a hefty payment and asylum on an island lacking an extradition treaty with the U.S.

Determined to end the siege, the authorities have threatened to blow the craft out of the sky. U.S. Marshal Vince Larkin (John Cusack) tries to defuse the tense situation and convince his superiors to proceed with an alternate course of action. In doing so, Larkin risks an epic disaster as the completely disabled plane heads for the bustling Las Vegas Strip.

The job of injecting heavy doses of testosterone into *Con Air* fell upon the shoulders of first-time feature director Simon West and cinematographer David Tattersall, BSC (*Radioland Murders, Moll Flanders*). Tattersall gained his earliest experience in England's music video and commercial scene during the mid-Eighties. He then progressed to British television and features such as *The Bridge* and *The Wind in the Willows,* a children's film directed by Monty Python alumnus Terry Jones.

Tattersall also shot some 30 episodes of the American TV series *The Young Indiana Jones Chronicles* in 16mm over a two-year period on various locations worldwide. This assignment eventually led to the plum project he will begin this summer: serving as George Lucas' director of photography on the first installment of the *Star Wars* "prequel" trilogy.

In the case of *Con Air,* Tattersall benefitted directly from his music video experience. Simon West had collaborated with the cameraman during the late Eighties on a "freebie" rock star-studded "charity video" (*Life Aid Armenia*) in Britain. Recalls West, "We had three small lights and it was black-and-white. I was so impressed with what he accomplished under those limitations that I knew I wanted to work with him again. However, David was always off around the world shooting *Young Indy* while I was directing commercials in England and America. I was pleased to be able to finally work with him on *Con Air.*"

West and Tattersall devised a highly specific visual schematic for the picture that indicates the psychology of Cage's character during his ongoing plight. Explains Tattersall, "The film starts out with a gritty, realistic atmosphere and then, through a series of crazy and unpredictable events, becomes quite psychedelic by the time we get to Las Vegas. The story has quite a linear structure, so Simon developed some ways to keep things visually interesting. We varied the look from place to place, but kept each sequence very controlled within its own approach to color."

West adds, "The shifting visual styles of *Con Air* were intricately planned. Each section has a specific look; for example, the opening sequence recounting Poe's Desert Storm experiences (which

Cyrus "The Virus" Grissom (John Malkovich) mistreats a pilot as the convict crew takes over. Tattersall used contrasty lighting throughout the airborne portions of the film.

Photos by Frank Masi, courtesy of Touchstone Pictures Company and Jerry Bruckheimer.

mixes real war footage with staged shots depicting the character's heroism) is cast in a strong golden hue because of the desert aspect."

Poe's return to the States, and to his steadfast wife, is shown in dark, subdued shades; his subsequent prison time is seen in a very restricted palette of grays and blues. "His whole life has fallen apart; he is no longer the hero, and is at the bottom of society, in jail," notes West. "The prison sequences were art-directed and lit so that there would be no color. It's as if the color of his life has been drained away.

Moody, atmospheric touches dominate *Con Air*. Tattersall lit most close-ups in half-shadow, creating a compelling, noir-like look. Cage's strong facial features are often dramatically sculpted and chiseled with light, with certain planes of his face dropping into dark, rich shadows.

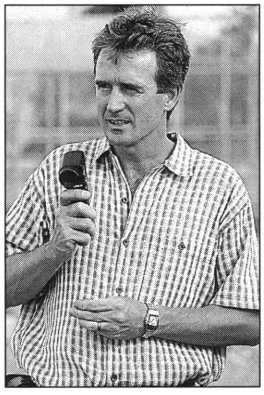
Once the action begins on the transport plane — a darkened, highly stylized prison with wings — Tattersall's use of half-lighting and small amounts of fill becomes even more pronounced. "We wanted a contrasty type of lighting throughout, but especially in the airborne sequences that focus on the bad guys," he explains.

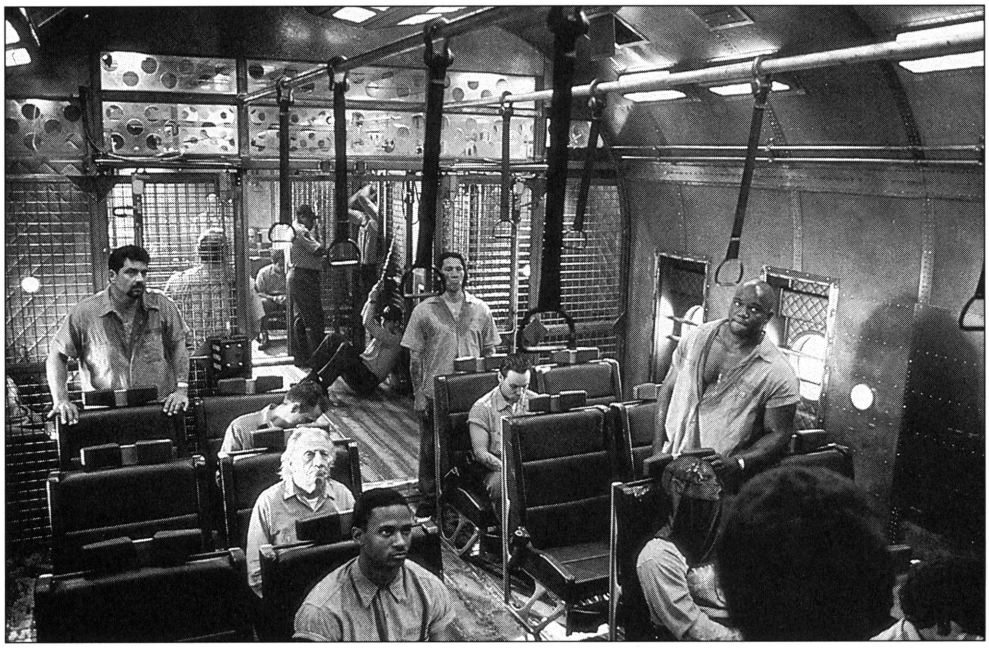
This is especially true of the scenes in the belly of the plane, where the lighting is motivated by two rows of stylized round fixtures mounted in the floor. While not nearly as extreme as some examples of the currently popular "less is more" school of deeply shadowed and dimly lit action lighting, the plane sequences offer little or no superfluous illumination. Tattersall feels that this heavily shadowed approach "works well with this type of story. The guys on the plane are some of the worst psychos imaginable. We wanted a fairly edgy look to emphasize their underlying meanness and desperation."

The filmmakers augmented this hard-light strategy with harsh, disorienting angles achieved with long, space-compressing lenses. This strategy lent the plane interiors a truly chaotic, claustrophobic feeling. In line with this approach, very little lens diffusion was utilized. Notes West, "We went for the opposite of diffusion with the hard lighting on the convicts: I tried to play up their scars and black eyes, and the hard texture of their faces. It's not a pretty picture when you're in the plane with these prisoners, who are so utterly desperate to gain their freedom. Of course, we did use diffusion on close-ups of Poe's wife, Tricia (Monica Potter). She was made to look very soft and appealing, like an angel amid all of this hard action and evil."

The plane interior was a 44,000-pound, four-walled set with a hard ceiling. The structure was mounted on computerized gimbals so that it could simulate in-flight movement. "Because it was an enclosed tube, we had to design the lighting into the ceiling structure, Tattersall explains. "We hung 150 nook lights from a rig welded to the roof of the set. These lights shone through the 'practical' light portals that were built into the set. For the window illumination, we had 10 Maxi-Brutes going through a 50-foot diffusion screen. We also had a 20K on a crane, which we could move to add to the sensation that the plane was rolling."

The dark, dank plane interiors are contrasted with the exteriors, which the cinematographer describes as "expansive, like you see in wide-screen epics.





Top left: ***Cameron Poe (Nicholas Cage) begins his arduous passage to freedom. Tattersall (top right) gave both the prison and the interior of the transport plane (bottom) a chaotic, claustrophobic feel to emphasize the inmates' meanness and desperation.***

These are men trying to break out of imprisonment to freedom, and we wanted a very clear delineation between where they were and where they're trying to go."

After the prison plane is commandeered, the action shifts to two different airports. "Because we have the plane taking off from one airport and then landing at two others, Simon felt it was important to make the airports all look very different," says Tattersall. "The prisoners are boarded onto the plane at the Oakland, California, airport, a high-security situation which we shot in a regimented, disciplined way to echo that tightly controlled feeling. It was almost clinical, with very formal compositions and restrained, militaristic blues, greys and browns."

A gigantic dust storm sequence was devised for the first landing sequence, which occurs in Carson City, Nevada. This blustering effect, however, proved difficult to control. "We had eight six-foot ritter fans, and at each one we had two to three effects operators feeding in Fuller's Earth and smoke. It was very easy to overdo *or* underdo it. With 24 people adding in smoke and earth all at once, it was pretty tricky; if a few of them put in too much, we'd have a stretch of film where you couldn't see anything, and if they put in too little, we'd have a clear day!"

The next landing takes place at a small, atmospheric airstrip on the Salt Flats of Utah, where a skirmish erupts between the criminals and the Special Forces Army Team. During the production's 15 shooting days, the temperature averaged 120°F. As a result, only interiors and/or shaded close-ups could be filmed during prime daylight hours; the bulk of shooting had to take place either early or late in the day. But the glaring lumination of the white flats allowed West to indulge in a highly regimented approach to color.

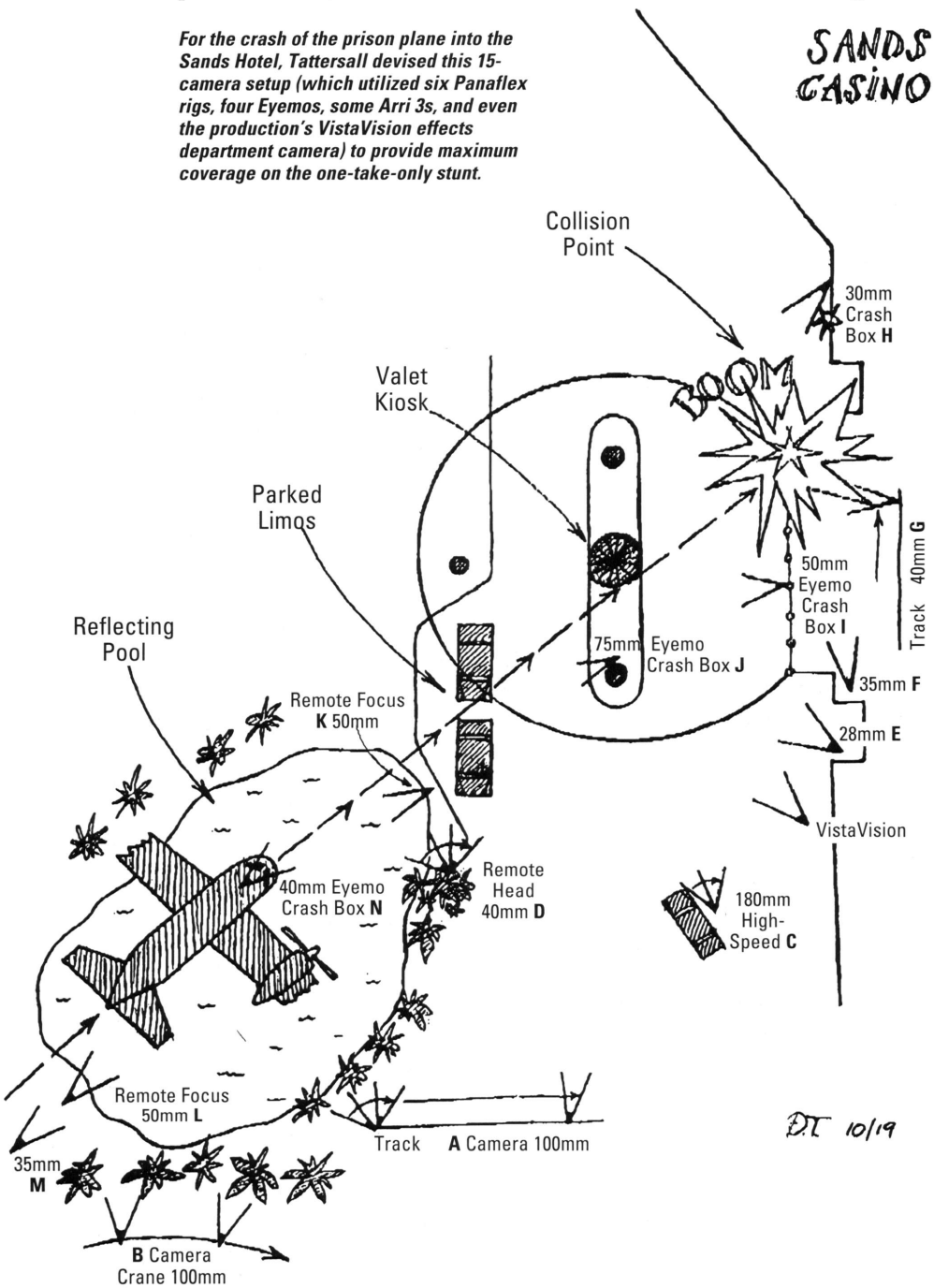
Notes the director, "The buildings there are made of this bleached wood, so they are kind of a gray-white. We had the white salt-flat floor, gray-white buildings, the stripped-down silver plane and these steely blue skies. That was all very carefully planned and art-directed."

The cinematographer concurs, "The Salt Flats were such a pure white that it was almost like a *Fargo* situation. We wanted to emphasize the blue sky against the white Salt Flats, so we used heavy polarization on the lens."

As can be imagined, the flatlands' innate reflectivity posed specific lighting problems. "We had so much natural bounce from the strong sun on the Salt Flats floor that we needed a very large soft light just to match it, either as our key light, or for fill when working with the natural light," says Tattersall.

To meet that challenge, a 15-foot scissorlift was rigged with three 12K HMIs and a 10' x 20' diffusion panel to create a "huge moving soft light that we could drive around quickly once the action was choreographed," Tattersall explains. ➢

For the crash of the prison plane into the Sands Hotel, Tattersall devised this 15-camera setup (which utilized six Panaflex rigs, four Eyemos, some Arri 3s, and even the production's VistaVision effects department camera) to provide maximum coverage on the one-take-only stunt.



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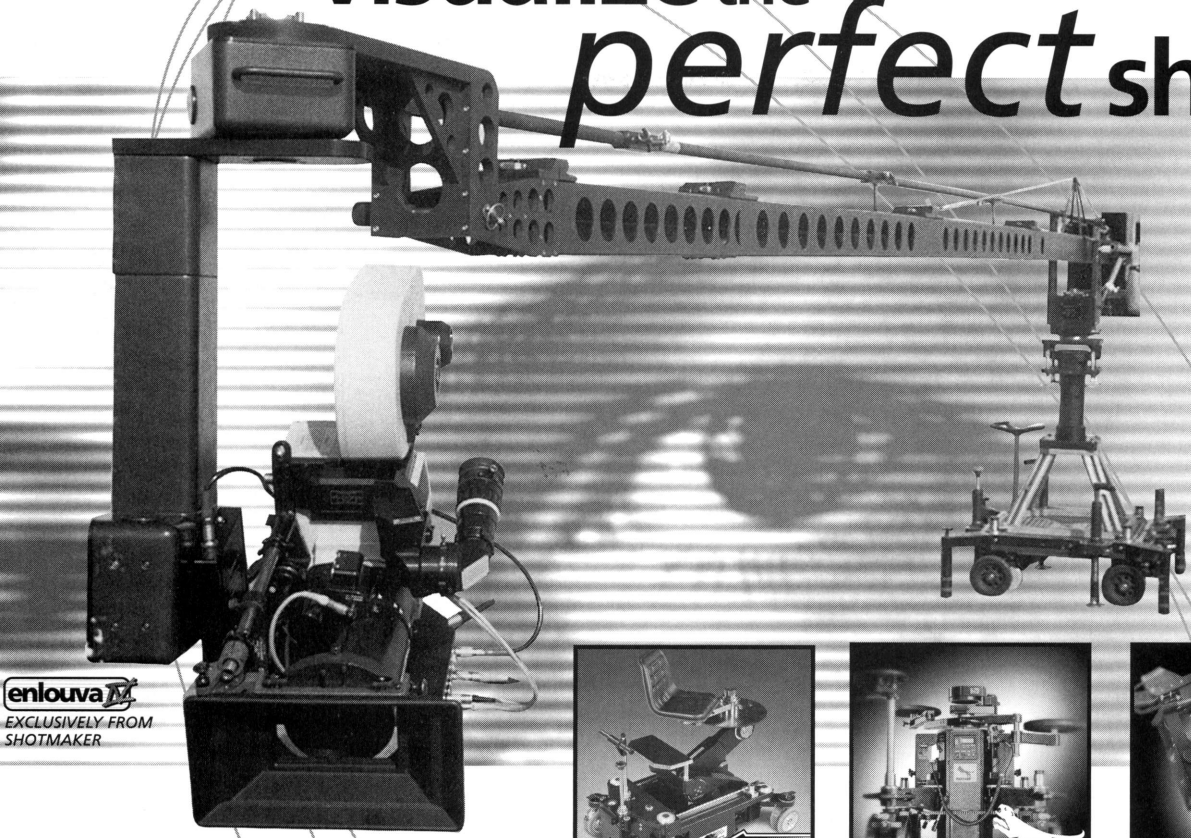

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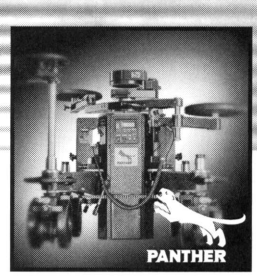

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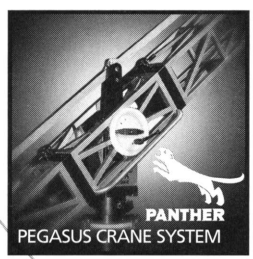

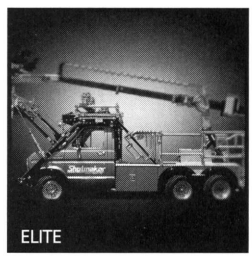

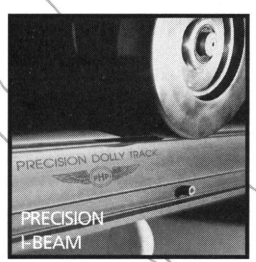

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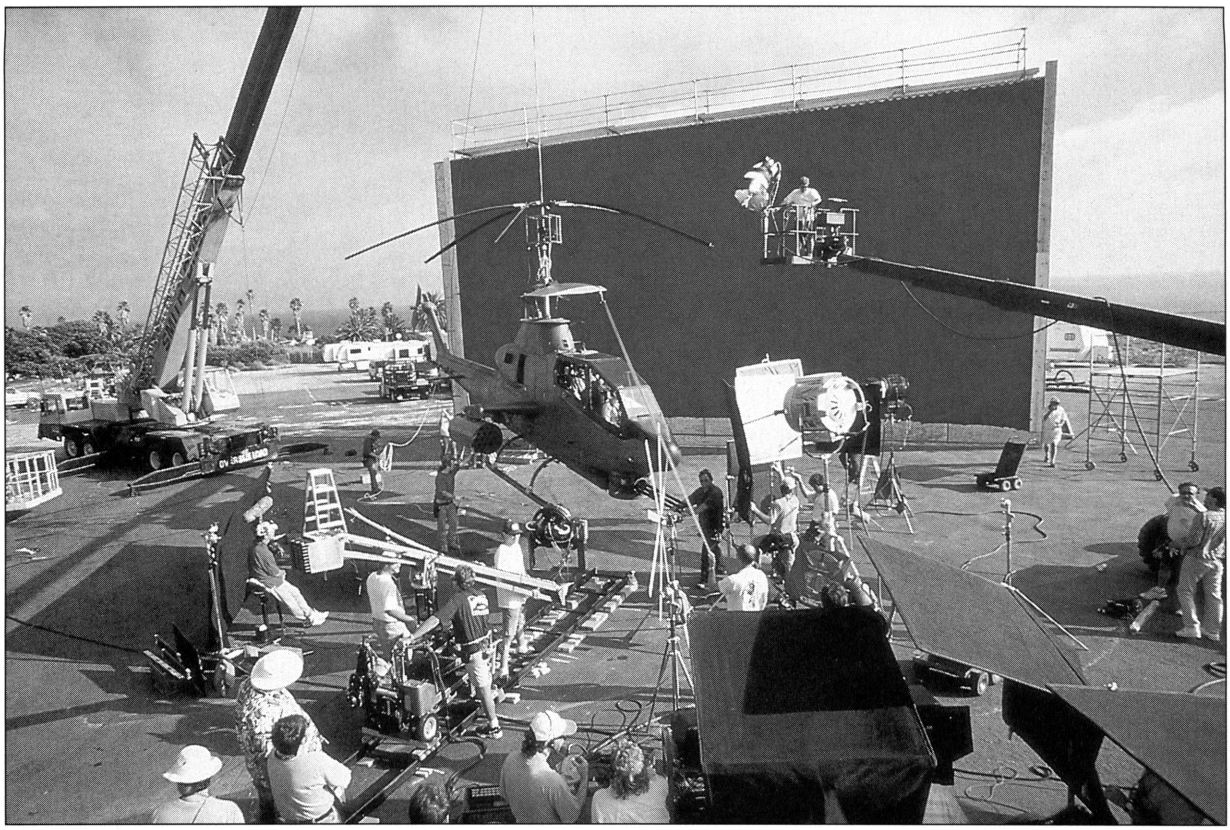

A full-scale Cobra attack helicopter is positioned for bluescreen work. The full-bore action premise of* Con Air *demanded extensive compositing and effects work, and Tattersall's experience with such techniques on* The Young Indiana Jones Chronicles *was invaluable.

The combination of the white landscape, the strong desert light and the huge 36K moving soft light allowed Tattersall to shoot the Salt Flats sequence with 50 ASA 5245. "I liked working with the 45; it resulted in a very sharp, fine grain and colorful image, just as one would expect," he says.

Throughout the Salt Flat sequences, Tattersall managed to maintain an aperture between f5.6 and f11 even though he was using such a slow stock. "We wanted a fair amount of depth of field throughout," he notes. "We also wanted a very clear, clean look. We rarely used filters, and that desire for a clean look is also a main reason we shot in anamorphic instead of with Super 35 — so we could avoid the added optical step and grainier image."

In terms of the lenses outfitted on the production's multiple Platinum Panavision cameras, *Con Air* was often a study in contradictions. "Throughout most of the picture we used wide lenses, especially Panavision's 28mm E-series T2.3," but extremely elongated lenses were the rule on the Salt Flats exteriors. "We had a lot of space, and we wanted to use it all. So we used the 1200mm T6 Canon lens that Panavision rents, and the incredible 3:1 270mm-840mm T4.5 Panavision Primo zoom, which is wonderful, but so big that the crew called it 'the Hubble.' Actually, we often used the 3:1 at the long end."

The older Panavision E-Series Auto Panatar lenses were used for most of *Con Air*, primarily because "it was a very busy summer and there weren't many Primos available," says Tattersall with a chuckle. "The E lenses worked well for us, though. The Primos tend to be kind of heavy and bulky, and we were constantly putting cameras up on Titan cranes and on rigs like the Cable Cam; we ran cameras almost a mile down the Las Vegas Strip, sometimes on a remote head, traveling at 60 miles an hour for a scene in which the plane crash-lands in the middle of the street. Those types of shots were a little less taxing with the lighter lenses."

While the lighting approach changes dramatically throughout the picture, Nicolas Cage is bathed in a fairly subtle but noticeable golden glow in many scenes. The star was "lit heroically quite often," Tattersall acknowledges. The difference between the lighting of Cage and other principals is especially noticeable in a scene where John Cusack's Federal Marshal Larkin interrupts Cage as the latter confronts the drug-runners behind the hijacking.

This encounter ensues in a hangar-type building (one of the interiors at the Salt Flats location) that was shot during the height of the midday sun. In the scene, Cage's golden aura is contrasted with Cusack's cold, white illumination, even though the two are but a few feet apart. According to Tattersall, both looks were partially motivated by actual lighting conditions. "Part of the ceiling of this old structure was dirty, gold-colored, corrugated, semi-translucent plastic, which you can see in a shot or two," the cinematographer explains. "Simon liked that, but he wanted some variation, so during one lunch break, when no one was around, he took a shotgun and blew some holes in another section of the ceiling, which was opaque. That gave us some fantastic beams of

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A Good Old-Fashioned Disaster

Dream Quest Images uses traditional in-camera effects techniques to send an airplane hurtling through one of the Las Vegas Strip's neon icons.

In conceiving the visual effects for *Con Air*, Dream Quest Images (Academy Award-winners for *Total Recall* and *The Abyss*) accepted a variety of digital effects challenges, but one of the most convincing scenes in *Con Air* was achieved in-camera with miniature models.

The script called for a transport aircraft to crash through the neck of the giant neon guitar within the Las Vegas Hard Rock Cafe sign, prior to its collision with the Strip. Early on, however, Dream Quest decided that this effect would entail working in the real world, and not cyberspace. Comments David Goldberg, Dream Quest's effects supervisor on *Con Air*, "Computer-generated imagery doesn't work well for big physical reactions like crashing objects — high-speed miniatures are the only way to go."

A 1/5-scale miniature neon Hard Rock sign, built with three removable necks, was placed on a rooftop. The sign was 18 feet long from end to end; the necks ran 10 feet in length; and the same-scale plane measured 18-feet long with a 22-foot wingspan. The plane was suspended on a wire between two cranes, and moved at speeds of up to 40 m.p.h. via a pulley system powered by a Ford Bronco.

Over the course of two weeks, the three neon guitar necks and the model aircraft attempted to occupy the same space at the same time, with predictable and spectacular results. (The three takes took two weeks to accomplish because rebuilding the sign required a few days of work.)

"Because we were shooting this effect outside, the sign had to be strong enough to stand up to a bit of wind, but light enough to break apart easily," explains Goldberg. "We also had to match a very specific time of day, and had about a two-minute window each day in which to do that."

The sign itself consisted of 600 pieces of miniature neon (approximately the size of spaghetti strands) powered by 60 transformers. "To keep the sign lightweight, we had to use below-grade wiring," Goldberg says. "We could only turn the sign on for about a minute before it would heat up and start to catch fire!"

The effects team captured the shots with six Panastar cameras (running from 46 to 98fps) equipped with lenses ranging from 30 to 100mm. "They used footage from two of the three takes, for a total of about eight different shots in the final film," Goldberg tallies.

Dream Quest functions as a completely autonomous effects unit — working in tandem with the director and cinematographer to choose camera angles, frame rates and lighting schemes — and the effects house conducts all of its actual filming independent of a production.

On *Con Air*, the company chose to shoot with Kodak's Vision 500 stock, which Goldberg found to be "faster than I would have liked, but we were running at high frame rates at dusk. Taking our exposure off the sky and the neon pretty much dictated our f-stops, which in turn called for fast stock." Obtaining adequate depth of field, always a major concern with miniature work, also dictated use of this particular negative.

Despite all of the headaches involved in accomplishing the Hard Rock sign effect without the aid of CGI, Goldberg is pleased to have achieved the shot with old-school expertise. "Models have been widely replaced by computer work," he notes with a tinge of regret. "Digital is enjoyable, but this was in-camera, right in front of you. It was tense but fun!"

— *Eric Rudolph*

white light coursing through the dark, dusty interior; we called them 'God's Beams.' We produced these beams naturally for a lot of the sequence, but two-thirds of the way through shooting we lost the sun and had to duplicate the look with Xenons."

After the plane leaves the Salt Flats, it is pursued by helicopters through Bryce Canyon before soaring to a climactic collision with the Sands Hotel on the Las Vegas Strip. Notes Tattersall, "The pace of the film picks up dramatically and then becomes relentless. For the Vegas scenes, the restrained color schemes were dropped; we pulled every 'party color' gel out of the truck, and made a lot of the lights flicker, because that's the look of Vegas, with all the crazy blinking neon.

> **"It was wild. We had 150 screaming extras and 40 stunt people, some of whom were quite close to the fast-moving plane. We didn't lose a single camera, though."**
>
> **—David Tattersall, BSC**

"The plane descends into Vegas in the middle of a rich reddish-orange sunset, and we wet down the Strip to get the maximum reflections from the neon lights. We went from this sedate, carefully controlled look to complete chaos with light. The contrast from the more sedate style of the film to that point makes the Vegas section seem even crazier."

What follows is one of the more extensive multi-camera action scenes ever filmed: a 15-camera setup, including six operated Panavision cameras, two or three Arri 3's, four Eyemos in crash boxes, one remote head, one crane and two tracking units. The lenses ranged from 28mm to 180mm (see diagram). Recounts Tattersall, "We even had an Eyemo in the cockpit, and we got a great shot with it.

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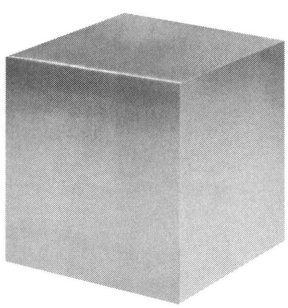

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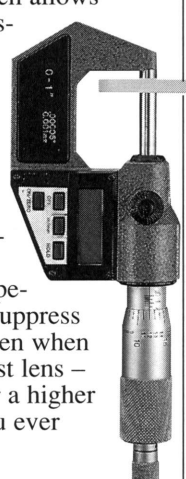

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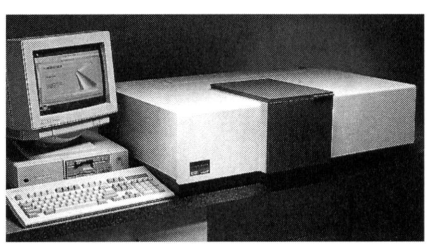

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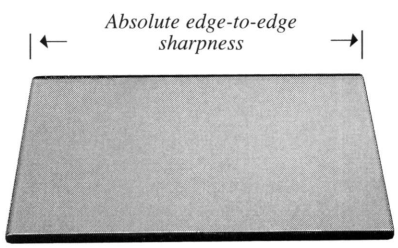

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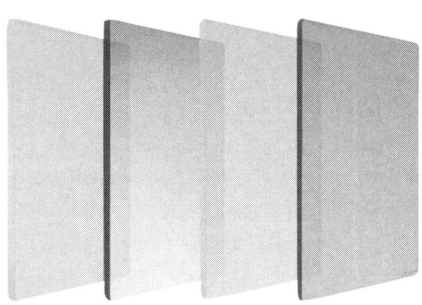

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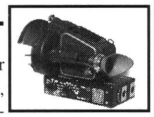

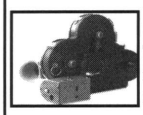

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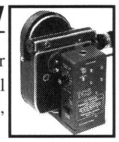

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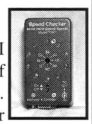

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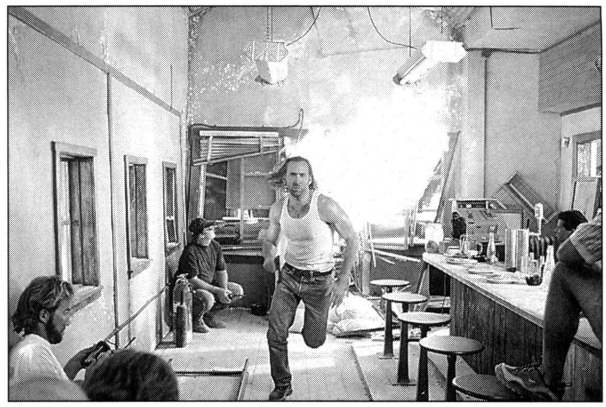

Poe outraces yet another threat. Tattersall tended to light the character rather heroically, adding a golden hue to scenes depicting his courageous deeds in Desert Storm.

Dream Quest had been shooting plates with a VistaVision camera (see sidebar), and Simon said, 'Let's use that too.' So one of the VistaVision shots made the cut as well."

The Eyemos were not the only cameras situated in dangerous spots, however. One Arri 3 placed directly in the oncoming plane's path was on a skateboard dolly pulled with ropes by a grip, who was 70 feet away watching a video feed. Another camera quite close to the action was placed on a hothead to allow it to pan with the moving plane. All of the cameras — except for the Eyemos — were wired to video assists. "It was wild," Tattersall attests. "We had 150 screaming extras and 40 stunt people, some of whom were quite close to the fast-moving plane. We didn't lose a single camera, though."

A full-scale mockup of the front of the hotel was constructed in the parking lot of the actual Sands, along with a large reflecting pool which was exploited to enhance the lighting of the scene. "We wanted these scenes, like everything we did in Vegas, to be full of light," the cinematographer says. "The pool helped to double the multitude of lights in the scene. It also helped hide the pulley system that pulled the plane into the front of the hotel."

The mock plane — fashioned around the chassis of a bus — was set at the top of a 15-foot ramp, from which it was propelled by the pulley system. The plane eventually reached a speed of 40mph. "We had water cannons in the pool and had the plane plow into explosives-laden limosines. The right wing, which still had an engine and a spinning propeller, crashes into a pillar holding up the Sands' parking-area awning, and the propeller bounces through the carport," Tattersall relates. (This occurs after that same propeller slices straight through the plane's cabin, interrupting a fracas between Poe and Grissom.)

Tattersall used a Night Sun, which is equipped with five 12Ks, as his key light for the sequence. "The Night Sun has its own self-contained generator, and the operator on top of the 90-foot crane arm can tweak the lights whenever needed," he notes. Fill was provided by two sets of three 10Ks aimed through 10' x 20' soft frost screens. "We hid a half-dozen 5Ks and about 40 Mole Pars in amongst the trees. The surrounding buildings were lit with 25 10Ks and four 20Ks. We were able to keep the stop at just under T4.0 using the Kodak 320 Vision stock, rated at 250 ASA."

It may be hard to believe, but the 15-camera sequence of the plane crashing into the Sands is only the picture's *penultimate* thrill. Following the fiery impact, a few convicts escape onto fire trucks, only to find Poe and Larkin pursuing them on police motorcycles. Says Tattersall, "This was the only scene we really weren't able to light; it just would have been too much try to light Fremont Street, which is the most brightly lit street in Vegas anyway. It was done entirely with available light [using the Vision 500 stock] except for 10-inch Kino Flo fluorescents taped to the motorcycles' speedometers, and a couple of HMI Sun Guns on the camera vehicle. This is a good example of the range of lighting styles in this picture — from 36K

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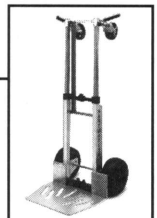

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Except for these "available light" chase scenes (which were, for the most part, undercranked at a rate of 18 fps), Tattersall avoided using the 500 ASA stock on *Con Air*. "We felt that the 500 was too far away from the slow 5245 that we used in the Salt Flats scenes. We used the 320 stock rated at 250. 'Pulling' the exposure index lowered the contrast and allowed us to use less fill; it also improved the grain structure, giving us a much better match to the 50 ASA 5245. We used the 500 only for this chase and in the high-speed cameras."

The chase leads to a tunnel, and since none could be found in Vegas, the oft-utilized 2nd Street tunnel in downtown Los Angeles served as a substitute. "To try to make the tunnel look a little different from every other time it's been used on screen, we set it up as if it were under construction," says Tattersall. "We had towers at both ends to act as obstacles, and cables strung with 500 75-watt bulbs, placed every few feet, plus 150 randomly flashing work lights. That really made the ceramic tiles on the tunnel walls twinkle and sparkle."

Close-ups for this chase scene were captured in a parking lot with an expensive variation of a "poor man's process" — a semi-truck fitted with lights was driven by in the background to simulate the light-bedecked tunnel walls.

When the film's tense situation is eventually resolved, Poe is finally reunited with his wife and the daughter whom he's never met. To achieve an air of familial harmony, West outlined yet another dramatically different lighting scheme. Says the director, "We went ultra-simple and just had a huge wall of warm, golden flashing lights, with a wet street. And because it is the Las Vegas Strip, this type of lighting does not seem improbable. All you see are a few emergency workers and the relieved, reunited family framed against this huge wall of light. It's a sweet, poetic ending." ◆

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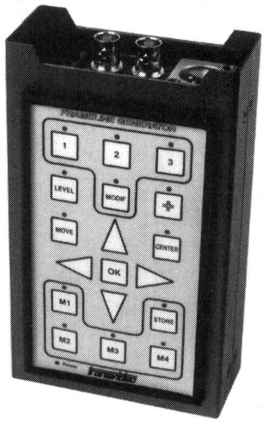

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Exemplary Images

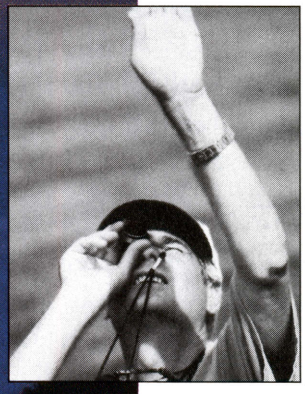
1997's ASC and Academy Award nominees embody the essence of cinematographic expertise.

by Christopher Probst

The American Society of Cinematographers and the Academy of Motion Picture Arts and Sciences recently recognized six 1996 films for their cinematographic excellence. This list ran the gamut of style, subject-matter, era and theme: the *The English Patient*, a lyrically haunting tale of lost love shot by John Seale, ASC, ACS; *Fargo*, a dark, tongue-in-check comedy photographed by Roger Deakins, ASC, BSC; *Michael Collins*, a message of equality and liberation realized on film by Chris Menges, BSC; *Evita*, a musical drama infused with shadows by Darius Khondji, AFC; *Fly Away Home*, a film whose innocent charm was enhanced by the work of Caleb Deschanel, ASC; and *The Ghost and the Darkness*, a tension-packed safari adventure expertly captured by Vilmos Zsigmond, ASC.

The first five of these pictures were nominated for Academy Awards, while the ASC's voters added *The Ghost and the Darkness* to their selection. Both the Academy and the ASC ultimately singled out John Seale's work on *The English Patient* as the year's best photography.

What follows is a recap of the nominated works. *AC* has devoted extra coverage to Deschanel's breathtaking work on *Fly Away Home*, since each of the other honored films have been covered in previous feature articles.



Caleb Deschanel (inset) imbued* Fly Away Home *with warmth, adding to its familial storyline. Helping this approach was the fact that the geese used in the film would only take flight during the dusk and dawn hours. Deschanel utilized Eastman's 5245 and 48 for daylight exteriors, capitalizing on the stocks, ability to render golden tones.

Photos by Takashi Seida, courtesy of Columbia Pictures, and Dark Light Pictures.

Caleb Deschanel, ASC
Fly Away Home

In a year so rife with the sound and fury of high-concept blockbuster films, it would seem that a little picture about a young girl raising an orphaned flock of geese could slip by unnoticed. But director Carroll Ballard and cinematographer Caleb Deschanel, ASC created a work that impressed moviegoers worldwide, as well as the ASC and Academy

Photos by Phil Bray, courtesy of Miramax.

For* The English Patient, *John Seale (inset) relied solely on 5298 throughout the entire shoot in order to maintain a consistent grain pattern. Using the 500 ASA stock during the brilliant desert daytime, he knocked down his exposure with the aid of heavy ND filtration.

nomination committees.

Fly Away Home explores the experiences of Amy Alden (Anna Paquin) as she learns to cope with the loss of her mother and reconcile with her somewhat eccentric father (Jeff Daniels), whom she barely knows. Amy must also confront a mounting sense of isolation as she enters adolescence.

After moving to her father's home in Canada, Amy discovers that a nearby lake serving as a haven for flocks of rare waterfowl is to be filled in to facilitate a new building development. While exploring the area, she discovers an abandoned nest of goose eggs and becomes a surrogate mother to the web-footed hatchlings. In learning to care for the orphaned goslings, she begins her own path toward healing.

While dealing with the quandaries of caring for a gaggle of yellow fuzz-balls with beaks, Amy and her father are informed by the local wildlife officer that the birds must have their wings clipped if they are to be raised domestically. Amy, however, is determined to prevent the endangered geese from being rendered flightless. With her father's help, she concocts a scheme to lead the birds south for the winter with small ultra-light airplanes — a job usually reserved for parent geese passing down ancestral flight paths.

For Ballard, hiring Deschanel to photograph the limited-budget, emotionally rich *Fly Away Home* was an easy choice. The pair had previously teamed up on a number of documentaries, educational films and commercials, as well as the visually stunning feature *The Black Stallion*.

Deschanel has previously received Academy nominations for *The Right Stuff* (1982) and *The Natural* (1984). In addition to his work in feature films, he also owns the commercial production company Dark Light Pictures, where he spends time shooting commercials between big-screen projects. The cameraman's other credits include *More American Graffiti*, *Being There*, *The Slugger's Wife* and *It Could Happen to You*.

Deschanel explains that the filmmakers strove from the outset to tell *Fly Away Home*'s story from Amy's perspective. "Working with Carroll is always such a plea-

ASC and Academy Award Nominees

John Seale, ACS, ASC
The English Patient *

Caleb Deschanel, ASC
Fly Away Home

Roger Deakins, ASC, BSC
Fargo

Darius Khondji, AFC
Evita

Chris Menges, BSC
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Vilmos Zsigmond, ASC
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Above: ***Director Carroll Ballard takes the helm of an ultra-light aircraft during the filming of*** **Fly Away Home,** ***with Deschanel assisting on the far right. The planes could not be fully loaded, since matching the geese's leisurely airspeed could cause the craft to stall.*** **Left:** ***Amy (Anna Paquin) mothers her brood.***

sure," the cinematographer comments. "He's always seeking those little details to make the film better, and looking for elements that help tell the story. Like *The Black Stallion*, which was told from a young boy's perspective, *Fly Away Home* takes the point of view of a child. So a lot of the visual details we chose were those that a child would observe when seeing something for the very first time. These are details that may have become trivial to adults, who have seen them a million times. But when you show certain things from a child's-eye view — like goose eggs hatching — it can open your eyes to the experience in a new and wondrous way. For me, making those kinds of discoveries is always a gratifying experience, and helps to keep me young."

Translating that visual philosophy into a physical, photographic methodology, Deschanel and Ballard carefully chose angles that reinforced Amy's youthful, inquisitive perspective. Explains Deschanel, "We kept the camera angles all fairly low to the ground, pretty much eye-level with Amy, or down low with the geese, since they became characters in the film as well. I also operated the camera because Carroll likes to work in a very loose fashion. He doesn't like to rehearse the actors to the point where they have to hit specific marks or walk and move in a particular way. But since Carroll and I both came out of documentaries, we were used to making decisions on our feet; on a documentary, you're mainly working with people who aren't hitting marks."

This instinctive approach lent the film a more spontaneous flow, but it also compelled Deschanel to devise accommodating lighting and the flexibility necessary to respond within the course of the performances. "Carroll would often talk to the actors and immediately want to shoot," relates Deschanel. "I'd then ask, 'Carroll, aren't we going to see a rehearsal?' And he'd say, 'Well, we just rehearsed it!' — meaning, he had just talked to the actors about what they were going to do, but we weren't necessarily going to see what was going to happen beforehand. Again, my documentary background helped, because I'd often been in a situation where I would see a moment happen in the middle of a shot and have to make a decision about whether to follow one person or another. However,

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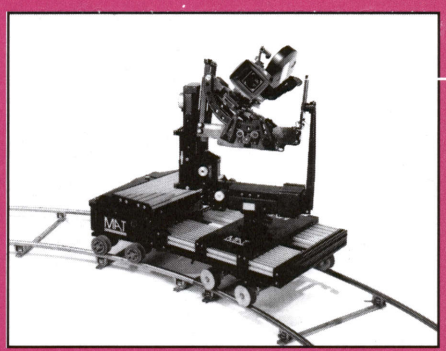

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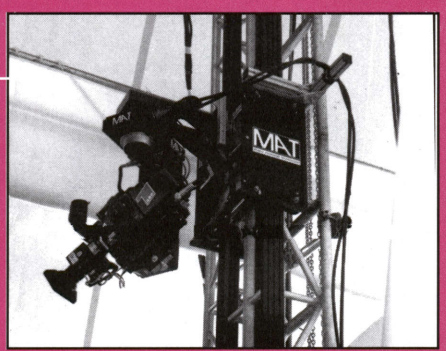

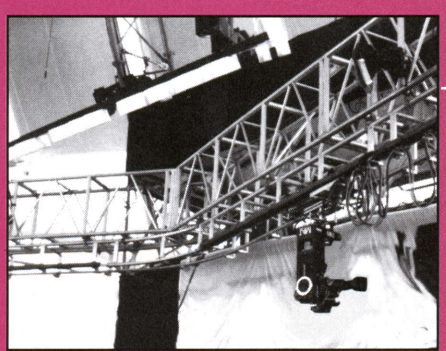

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shooting this way did create a certain kind of realism that I don't think would have existed if we had carefully laid out the shots.

"I'm not a believer in hard, fixed rules," he continues. "Sometimes I'll set a composition on a reverse angle of an over-the-shoulder shot on the same side of frame, which is not the way it's usually done. Normally, you have people look across the long side of frame, but I often find that there are other elements that affect what the audience wants to look at. You can alter where they look by merely changing the lighting. For instance, if the actor is looking across the short side of the frame, you can make the other side of the frame darker to control the viewer's eye. This idea relates back to elements used in painting. If you look at Renaissance paintings, or virtually any other style of paintings, you can see that the artists have used certain techniques to control where your eyes fall. If you understand those elements, you can then break those rules creatively."

Deschanel photographed *Fly Away Home* with Panavision cameras on Eastman Kodak EXR 5248 and 5245 stocks for day exteriors and 5293 for the majority of interiors and nighttime scenes (he also utilized the 500-ASA 5298 for a few exterior night scenes). He details, "I shot mostly with 48 outside, but I did use 45 quite a bit because it has a tendency to go bluer in the shadows and create a greater color contrast between the warm highlights and the cooler shadows. Also, 45 doesn't require an 85 filter, which saved some weight on the cameras that we had mounted on the ultra-light aircraft.

"For the ultra-light footage, we stripped down some Eclair cameras to make them really lightweight. The ultra-lights can fly with more weight, but the more you put on them, the faster they have to fly [in order to stay in the air]. Our planes had to fly slow enough so that the geese could keep up — about 30 miles per hour maximum."

Shooting entirely in Ontario, Canada, the filmmakers utilized many of the province's scenic vistas and sweeping skylines as part of the visual design of the film. Substantial portions of the picture incorporate flying footage captured from either a Wescam helicopter (operated by Hans Bjerno with second-unit cameraman Gary Capo), cameras mounted on the ultra-lights, or angles taken from ground level. However, Deschanel and Ballard were presented with one oddly positive obstacle throughout the aerial filming: the geese would only fly in the early part of the morning or late in the afternoon. This factor helped produce some spectacular dawn and dusk footage of the ultra-lights and geese aloft.

Detailing his approach for the day exteriors, Deschanel says, "On exteriors, you often don't have any control over the time of day or the location. But you can control the light by choosing where to set your camera. We actually did very little fill lighting because the stocks I used are basically designed to balance to sunlight in terms of their contrast ratios.

"One thing I do like to do on exteriors is to bounce light with different-colored materials. Instead of white muslin or grid cloth, I'll use various colored backgrounds that are commonly used in still photography. They're available in just about any color, and usually have a modeled texture. I put those in 12' x 12' frames and bring them in really close to the actors. With a plain white material, you have to move the bounce far enough away so that it doesn't feel obvious, but you can place a gray, modeled background really close to the actors so that the bounce light wraps around them and looks more natural. That way, the fill looks more like light that is coming off something natural to the surroundings than something reflecting off a white card. Also, the modeled surfaces are creating different color temperatures that are reflecting onto the actors, which is similar to what would happen naturally if they were standing next to a building, a tree or someone in a blue shirt. Everyone gets a lot of different light bouncing around them in reality, which affects what the light is like on a person's face.

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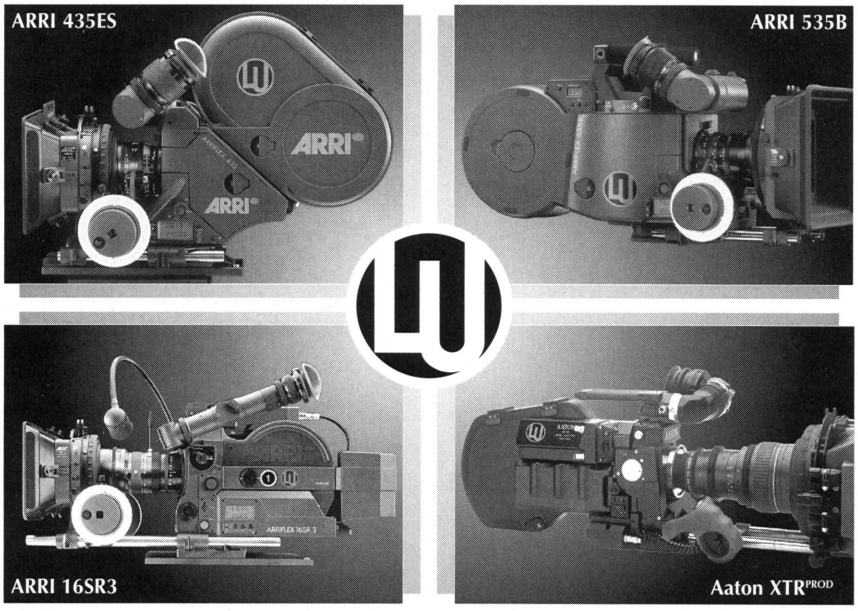

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terior light," he continues, "is that if you have a really blue sky, the fill light is around 20,000° Kelvin. For that reason, I'll often bounce into the shadow areas with a predominately blue modeled background as opposed to white. A white surface will bounce back sunlight, which has a color temperature of around 5600°K, and tends to look warmer in the shadows than it should."

For scenes set within the Aldens' home, the production filmed on stages that were lit the way a practical location would be. Deschanel explains, "When I have complete control of something — like when I'm lighting on a stage — I prefer to have some elements of the lighting a little bit out of control so that it is more true to reality. I try to imagine that I'm at a real location, where I don't have control over some of the elements — like when I'm doing a documentary, and have to shoot 'as is.' If you have a perfect balance between the lighting elements, the scene won't feel realistic. I'm not a believer in 'naturalistic' lighting. What we do as cinematographers should be motivated more by the drama of the scene than by reality. There are times when you create a certain kind of light because you want to amplify the emotion of the scene. At other times, you use light to create focus on one character over another. You're creating something to help tell the story. Cinematography is more about finding the right point to create a certain *unreality* that will support the drama, while still allowing the audience to feel that it's real. That's the tricky part of a film, but it's also the most exciting and rewarding part as well."

An example of this approach can be seen early in *Fly Away Home*, when Amy enters her father's barn/workshop for the first time. Deschanel chose to cast the atmospheric interior in dark, foreboding shadows with strong shafts of daylight penetrating the blackness. "The barn is always a mysterious place," he relates. "It's a new environment for Amy that represents both of her parents. For example, she finds an old, dusty dresser with her mother's clothes in it, and her father uses the barn

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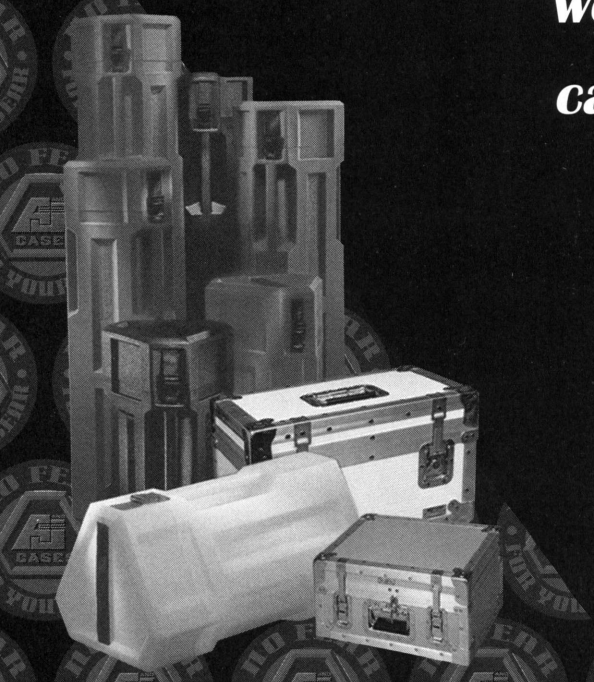

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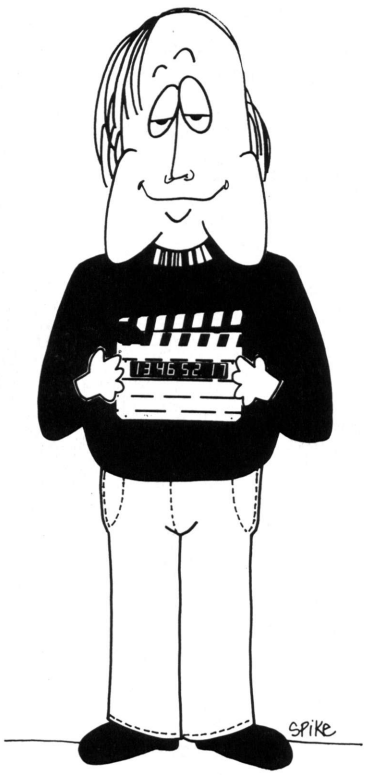

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for his workshop and furnace, where he makes steel sculptures. There were places in the barn that were kept mysterious to allow you to imagine unseen elements that you wanted to see. We used a similar technique on *The Black Stallion* when the boy finds the horse in a barn."

When Amy discovers the abandoned nest of goose eggs, she snatches them up and takes them back into the barn. There, she creates a new nest in the drawer of her mother's dusty dresser. She also places a work light on a tray in the drawer underneath the eggs to create an impromptu incubator, which provided Deschanel with the opportunity to exploit the photographic possibilities of the shadowy barn interior. "In a lot of ways, the barn represented a sort of incubation place for Amy to regain her life," he says. "She has lost her mother, but by raising the geese she becomes a mother herself and learns to cope with life and revive her own spirit."

Deschanel shot the goose eggs hatching in the dresser drawer over a period of three nights. He lit the eggs with tungsten units shining through a piece of milk-glass at the back of the drawer, which represented the glow bleeding up from Amy's light in the drawer below. "The eggs hatching is one of those wonderful sequences where you just sit back and watch the moment," the cinematographer says. "Of course, every time we started the camera, the goslings would stop. When we shut off the camera, they'd start hatching again. It was really frustrating, but fascinating as well.

"We had a bellows on the camera so that we could extend the lens and focus really close. We were using fairly wide lenses, but we placed them as close as we could to the eggs to give the shots a sense of intimacy. For goose POV shots of Amy looking at the goslings as they hatch, we actually pulled the lenses out of the lens socket so that we could focus really close and create the bug-eyed point of view of the goslings, as if they took her to be their mother."

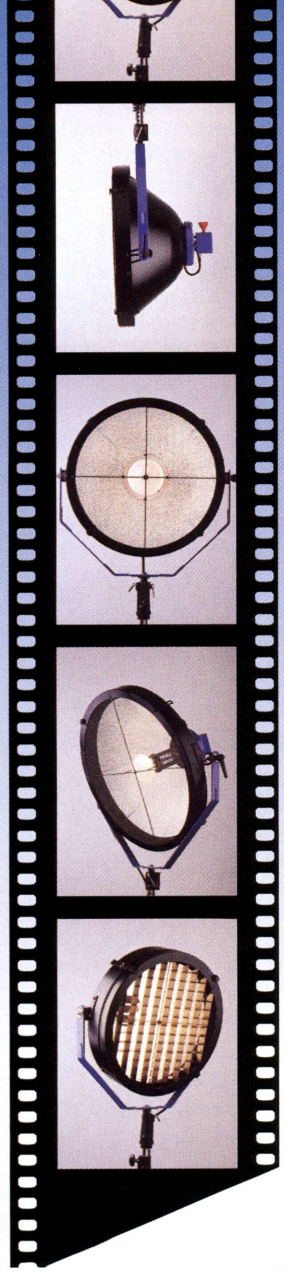
With the hatching footage behind them, the production faced another hurdle in photographing the flock in various stages of development. "The biggest problem with filming the geese was getting them to look at something," says Deschanel. "Unlike photographing dogs, where it's fairly easy to get them to turn their heads and look at something to give you motivation for a point of view, we'd spend a lot of time just getting the geese to look in one direction or another. If you make noise to a dog or a horse, usually they'll turn and look, but a goose won't."

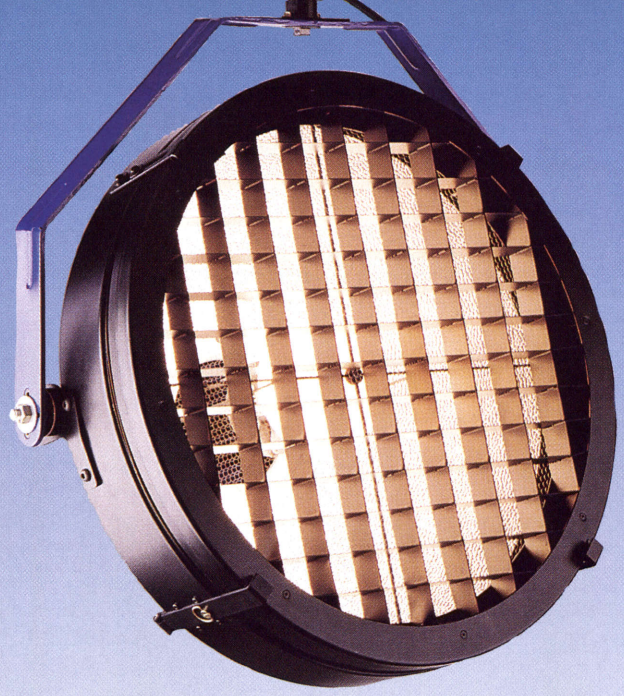
Low-angle shots at goose-height off the ground were achieved with a small bicycle dolly which enabled Deschanel to push the contraption to follow or lead the geese.

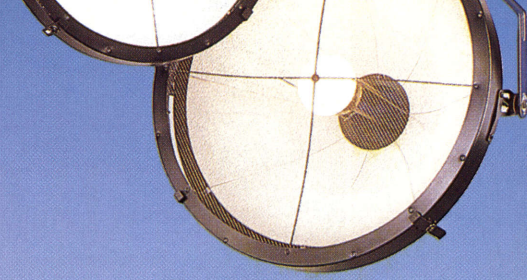
One of *Fly Away Home*'s most memorable and talked-about sequences, in which Amy and her mother are involved in an auto accident, occurs within the opening credits. Designed with a series of out-of-focus shots of the car's windshield wipers and no actual sound elements other than musical accompaniment, the sequence handles the traumatic experience with poetic grace and sensitivity.

Ballard and Deschanel filmed the driving and crash strictly from a subjective perspective to establish the film's POV style. Deschanel notes, "We wanted to create a scene where there's an accident and it's clear that the mother dies, but we didn't want the scene to be so traumatic that children watching the film would be upset by it. The crash was shot in a very stylistic way, which was deliberate. It's apparent to the audience that the mother dies, but the style allows you to step back and not feel the horror.

"If this were a 'Hollywood' action film, I think we'd probably have had the car go over the edge of a cliff before cutting to an outside angle and showing all of these sparks as the car rolls over and then bursts into flames. In the case of *Fly Away Home*, the audience will piece the sequence together in their heads almost as a mosaic, but they don't actually see the graphics of a real crash. When the car rolls over and the point of view is from the inside of the car,







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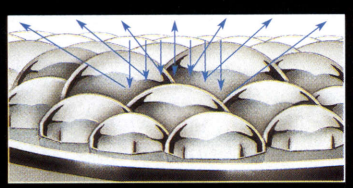

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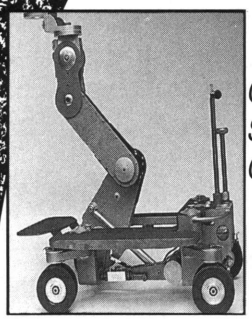

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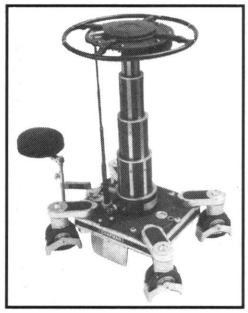

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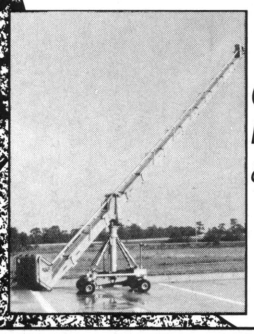

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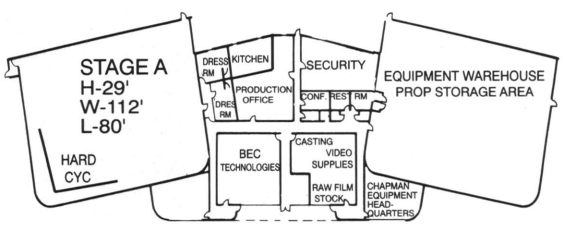

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it's almost like a dream. If you've ever been in an accident, time seems to slow down. It feels almost nightmarish, not real."

After the car has flipped upside-down, the camera adopts a delirious, almost surreal perspective, adding to the sequence's dreamlike ambience. "When the firemen's flashlights shone in on the broken glass, I was slowly rolling the camera in a POV shot," explains Deschanel. "From Amy's perspective, you see a hand reaching in. Another light flashes, and you see a portion of a fireman's face as if you're being pulled from the car. Then, as you're being carried from the wreck, you see the edge of the car. You tilt up and see an ambulance, emergency lights and other firemen. Then you're passing by the ambulance sideways and being placed inside. After that, fade to being inside the hospital.

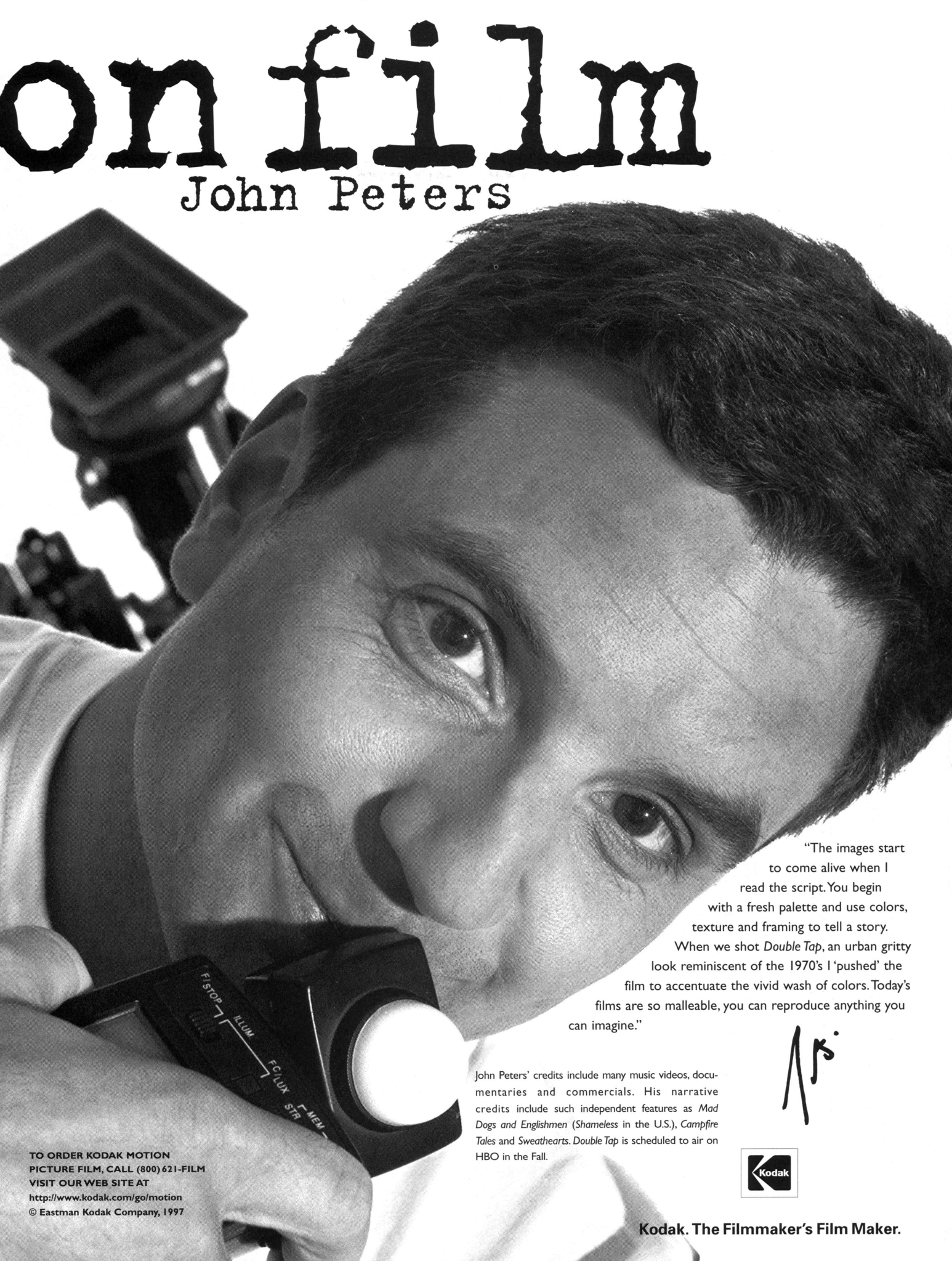
"All of the movement was done handheld, but I was operating in almost a ballet-like way. I would sort of sweep across with the camera as I was going by the car. Then I was being carried on a stretcher as we moved past the ambulance."

The driving footage was shot on a process trailer utilizing a series of lights shining into various reflectors positioned above and to the sides of the car. These could be rotated to lend a feeling of movement to the light. Additional fixtures were placed on dimmers that would be periodically dialed up or down as if lights were passing by.

Deschanel is currently shooting *Hope Floats* for director Forest Whitaker. He says that his goal remains the same from project to project. "My general feeling about shooting films is that I initially go in, read the script, and try to develop a visual point of view for the story," he explains. "But in the course of making the film, I adjust that concept based upon how I see the characters and how the actors represent those characters. I go into the film with an approach, but it's evolutionary. The most important thing is to understand what the point of view is — that will then dictate what you

on film

John Peters



"The images start to come alive when I read the script. You begin with a fresh palette and use colors, texture and framing to tell a story. When we shot *Double Tap*, an urban gritty look reminiscent of the 1970's I 'pushed' the film to accentuate the vivid wash of colors. Today's films are so malleable, you can reproduce anything you can imagine."

John Peters' credits include many music videos, documentaries and commercials. His narrative credits include such independent features as *Mad Dogs and Englishmen* (*Shameless* in the U.S.), *Campfire Tales* and *Sweathearts*. *Double Tap* is scheduled to air on HBO in the Fall.

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want to see, where you want to see it from, and how it should be lit."

John Seale, ASC, ACS
The English Patient
ASC AND ACADEMY AWARD WINNER

John Seale, ASC, ACS, this year's ASC and Academy Award-winning cinematographer, remembers his auspicious beginnings thusly: "I was working in the back country of Australia on 30,000 acres of empty land, and there were visual aspects of that scenery that were absolutely stunning. It made me think, 'Wouldn't it be great to have a job where I could photograph this to show to other people?'"

Fortunately for *English Patient* producer Saul Zaentz and writer/director Anthony Minghella, this cameraman brought to the production his invaluable years of experience filming in rugged conditions (see full coverage in *AC* Jan. 1997).

Early on in his prolific career, Seale established himself as one of Australia's most sought-after camera operators, working for such cinematographers as Russell Boyd, ACS; Don McAlpine, ASC, and Peter James, ASC, ACS. His work with Boyd prepared Seale to shoot the films *The Mosquito Coast*, *Witness*, and *Dead Poets Society* for director Peter Weir. His other credits include *The Firm*, *Gorillas in the Mist*, *Children of a Lesser God*, *The American President*, *Ghosts of Mississippi* and *The Paper*.

In addition to this year's laurels, Seale has earned two other Academy Award nominations, for *Witness* (1985) and *Rain Man* (1988). The latter film also earned him an ASC Award nomination.

The English Patient was nominated for a total of 12 Academy Awards and took home seven. Though captured in a standard 1.85:1 frame, the film was universally praised for its epic drama and sprawling vistas. Seale's renditions of the Tunisian desert, which is limned in warmly saturated yellow tones, recall the cinematic splendors of David Lean's *Lawrence of Arabia*. The cameraman says "I used coral filters to enhance the color [of the desert landscapes]. Light graduated coral filters were

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Photo by Phil Bray, courtesy of Miramax Films

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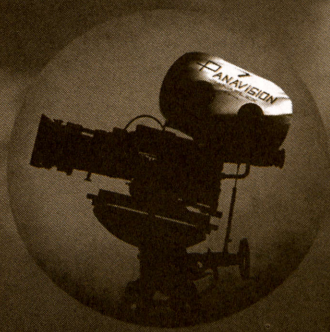

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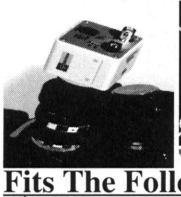

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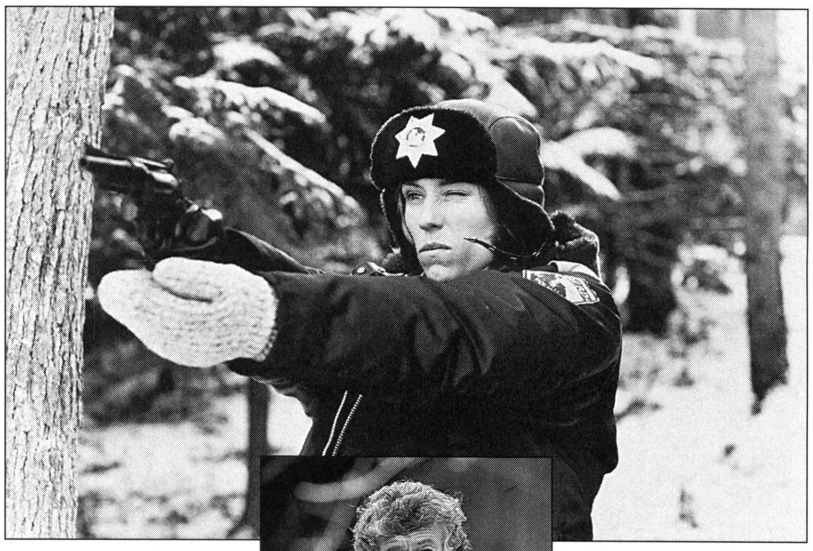

Photos by James Bridges and Michael Tackett, courtesy of Gramercy Pictures.

Marge (Francis McDormand) aims to find the truth. While shooting* Fargo, *Roger Deakins (inset) relied on heater-blankets to keep his Arri BL-4's warm, but found the winter's short daylight hours to be problematic.

added to the bottom of the frame to add color to the ground, and then ND grads and Pola screens were often used on the top of frame to maintain color continuity."

Seale photographed *The English Patient* entirely on one film stock — Eastman Kodak EXR 5298 — to maintain consistent grain and tonal ranges throughout the film. He often utilized 85ND9 or 85ND12 filters for the day exteriors to bring his effective ASA rating down to approximately 40.

Roger Deakins, ASC, BSC
Fargo

While filming Joel and Ethan Coen's *Fargo* on snowy locations in the northern Midwest (see *AC* March 1996), few of the film's crew members could have predicted the widespread critical praise that this quirky dark comedy would later receive. Despite a shoestring $7 million budget, cinematographer Roger Deakins, ASC, BSC nonetheless delivered a distinctive cinematic style amid adverse conditions. The filmmakers experienced record-high winter temperatures while shooting in Minnesota, requiring the production to chase the migrating snowfall into North Dakota in order to retain a frostbitten continuity. Adding to the challenge, *Fargo* was photographed almost entirely in practical, working locations, unlike Deakins' prior collaborations with the Coens on *The Hudsucker Proxy* and *Barton Fink*.

Deakins began his distinguished career shooting documentaries in his native England before photographing his first feature, *Another Time, Another Place*. His next project, the critically lauded film adaptation of George Orwell's *1984*, brought the director of photography into the forefront of rising British cinematographers. Deakins received the 1995 ASC Award for his impressive work on *The Shawshank Redemption* (see *AC* June 1995), which also earned him an Academy Award nomination. Likewise, his work on *Fargo* was nominated this year for both ASC and Academy Award nods. His other feature credits include *Sid and Nancy*, *Mountains of the Moon*, *The Secret Garden*, *Courage Under Fire* and *Dead Man Walking*. Deakins recently completed principal photography on *Kundun*, Martin Scorsese's upcoming biopic about the Dalai Lama, as well as the Coens' next picture, *The Big Lebowski*.

Deakins explains that he prefers to work on films that deal with the human condition, such as

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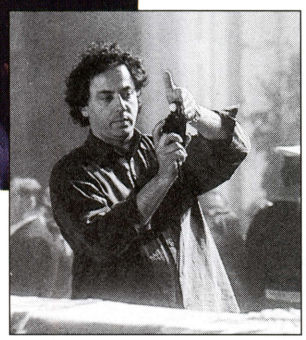
Eva Peron (Madonna) builds her popularity among the people. In Evita, *Darius Khondji (inset) favored the drama of blown-out windows — usually accomplished with tracing paper and a row of Dinos outside.*



Photos courtesy of David Appleby, courtesy of Cinergi Pictures Entertainment and Cinergi Productions, N.V.

Dead Man Walking, director Tim Robbins' examination of capital punishment. "That was shot in an almost documentary style," the cameraman reveals. "I went for a very simple, real look on that film, partially to give the actors a lot of flexibility, because the script and performances required that sort of situation. The contrasting aspect of *Fargo* was that even though I was going for a 'naturalistic' look and approach, I still knew exactly what the shots were so I that could light for them. It was all very considered and planned, whereas on *Dead Man Walking*, the shooting was more free-flowing and certainly not storyboarded. We were making it up as we went along, choosing the angles and lenses. In that type of situation, you have to be much more fluid and flexible with your lighting."

Says Deakins of his documentary roots, "It does help on a lot of the films that I have done, but I really wouldn't say that it was as big a factor on *Fargo*. If you want to hide lights, or do something quick and natural, there are little tricks I've picked up doing documentaries that I rely upon. But on *Fargo*, everything was very thought-out, even though we wanted it to look observational."

Fargo is currently being adapted into a television series. John S. Bartley, CSC will shoot the pilot for director Kathy Bates.

Darius Khondji, AFC
Evita

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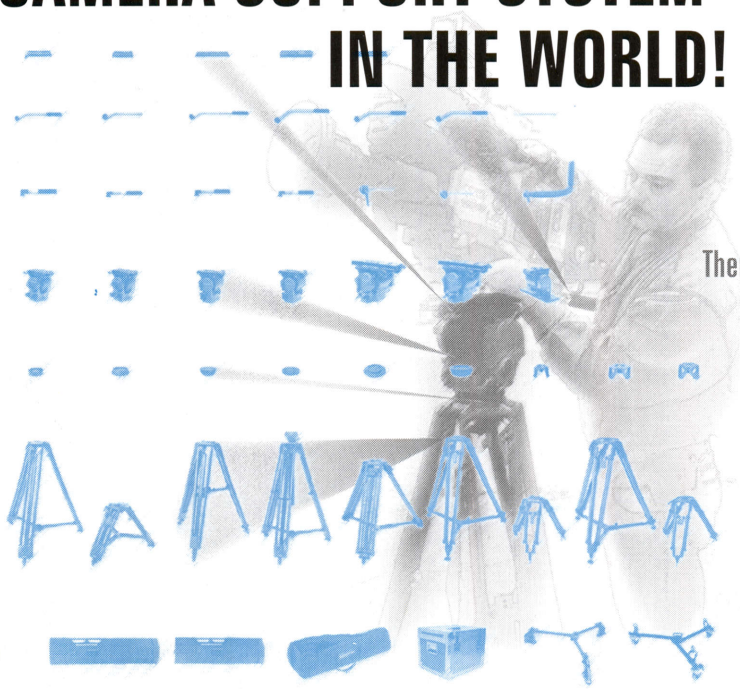

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phers. After cutting his teeth on music videos and commercials, Khondji first earned international recognition for his stunningly outlandish visual work on Jean-Pierre Jeunet and Marc Caro's *Delicatessen*. He also shot the duo's subsequent film, *The City of Lost Children*. His first American-produced effort, *Seven* (see *AC* Oct. 1995), earned the cinematographer his first ASC Award nomination.

Khondji has since photographed *Stealing Beauty* for Bernardo Bertolucci (see *AC* June 1996) and this year's ASC and Academy Award-nominated *Evita* (*AC* Jan. 1997) for Alan Parker. He is currently working once again with director Jean-Pierre Jeunet on *Alien: Resurrection*, due in theaters this fall.

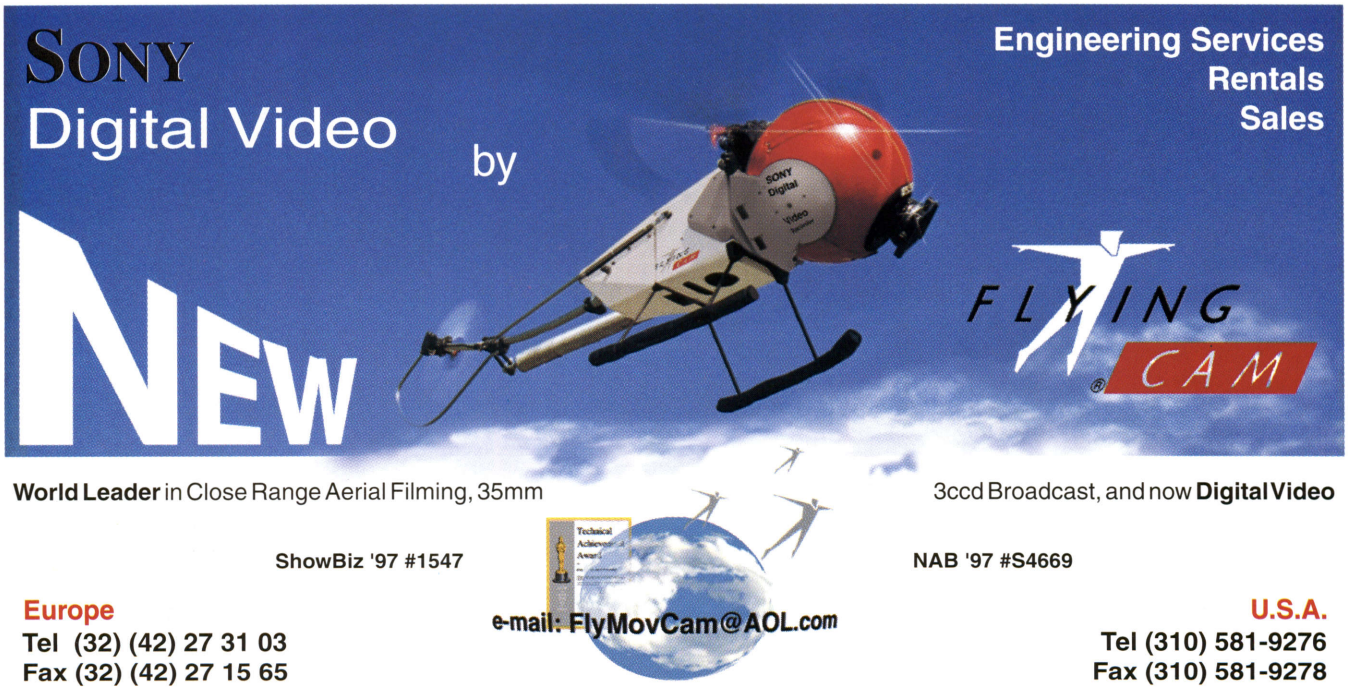
For Khondji, *Evita* represented a departure from the techniques he had used on previous pictures. On films such as *Seven*, the cinematographer's choice of lighting instruments consisted primarily of smaller tungsten units and Kino Flos, in accordance with his penchant for shooting at low light levels. On *Evita*, however, Khondji employed much larger units — ranging from 18K HMIs, Dinos, and Wendy lights — and often let a single motivated light-source carry a scene with little or no fill. Additionally, he incorporated much more lens filtration than he had on prior projects, and exploited Technicolor's ENR resilvering process to achieve a painterly visual style befitting the epic historical sweep of the narrative.

Shot on locations in Buenos Aires and Budapest and on stage at England's Shepperton Studios, *Evita* required its makers to orchestrate complex choreography set in several different eras and countries, and to execute scenes featuring as many as 4,000 extras.

Khondji utilized Moviecam cameras supplied by London-based Joe Dunton & Co., outfitted with Cooke anamorphic lenses provided by 2.35 Research PLC. His stocks included Eastman EXR 5245 for exteriors in Argentina, 5293 for the Argentinean interiors, and 5248 for any overcast days, as well as combat sequences and other controversial scenes. Additionally, Khondji used Arriflex's VariCon together with the ENR process in order to precisely control the contrast and black density of the film's prints. Says the cinematographer, "[The ENR process] is the only way to really increase the contrast and play with the colors before moving on to digital postproduction. ENR works on a scale of infrared, which effects the depth and thickness of the blacks. You vary the degree of infrared according to the picture."

Chris Menges, BSC
Michael Collins

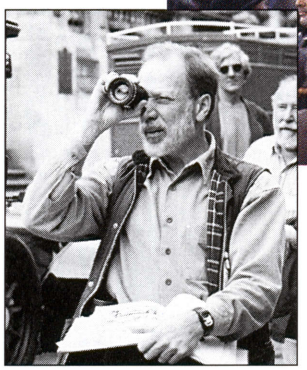
After taking a nine-year hiatus from camerawork to pursue directorial efforts (including the features *CrissCross* and *A World Apart*), Chris Menges, BSC made his return to cinematography with *Michael Collins*, director Neil Jordan's sweeping bio-pic about the Irish revolutionary leader. The duo's collaboration resulted in both ASC and Academy Award nominations for Menges.



The cameraman has received Oscars for his work on *The Killing Fields* (1984) and on *The Mission* (1986), both directed by Roland Joffe. His other credits include *Danny Boy* (also with director Neil Jordan), *Shy People, Comfort and Joy, Marie, High Season*, and the upcoming Jim Sheridan-directed picture, *The Boxer*.

Michael Collins was filmed in Dublin, Ireland, lending an authentic backdrop to the film's portrayal of the IRA leader's fight for independence. In light of recent efforts to restore the weathered city, the production had to carefully determine how to reduce the buildings to their former soot-soaked glory with smoke machines and thoughtful production-design "augmentations." Menges assisted this endeavor by utilizing the ENR process to help darken and desaturate the film's colors. He also employed cyan filtration to lend the picture a cold, grayish, monochromatic feel. "The ENR process helped us create a nearly monochrome image," reports Menges. "It took the bite off some of the more obvious primary colors and slightly increased the contrast. It enhances the silver [content in the negative], making the bluish tint kind of pearly."

Menges shot *Michael Collins* with Moviecam cameras outfitted with Zeiss primes and Cooke zooms. He used Eastman Kodak EXR 5248 for most exterior scenes, 5293 for late-day exteriors, and 5298 for night interiors and exteriors. ➢



IRA leader Michael Collins (Liam Neeson) gathers support for a free Ireland. In combination with careful art direction, Chris Menges (inset) utilized the ENR process to help restore modern-day Dublin to the dingier look of the past.

Photos by Tom Collins, courtesy of Warner Bros.

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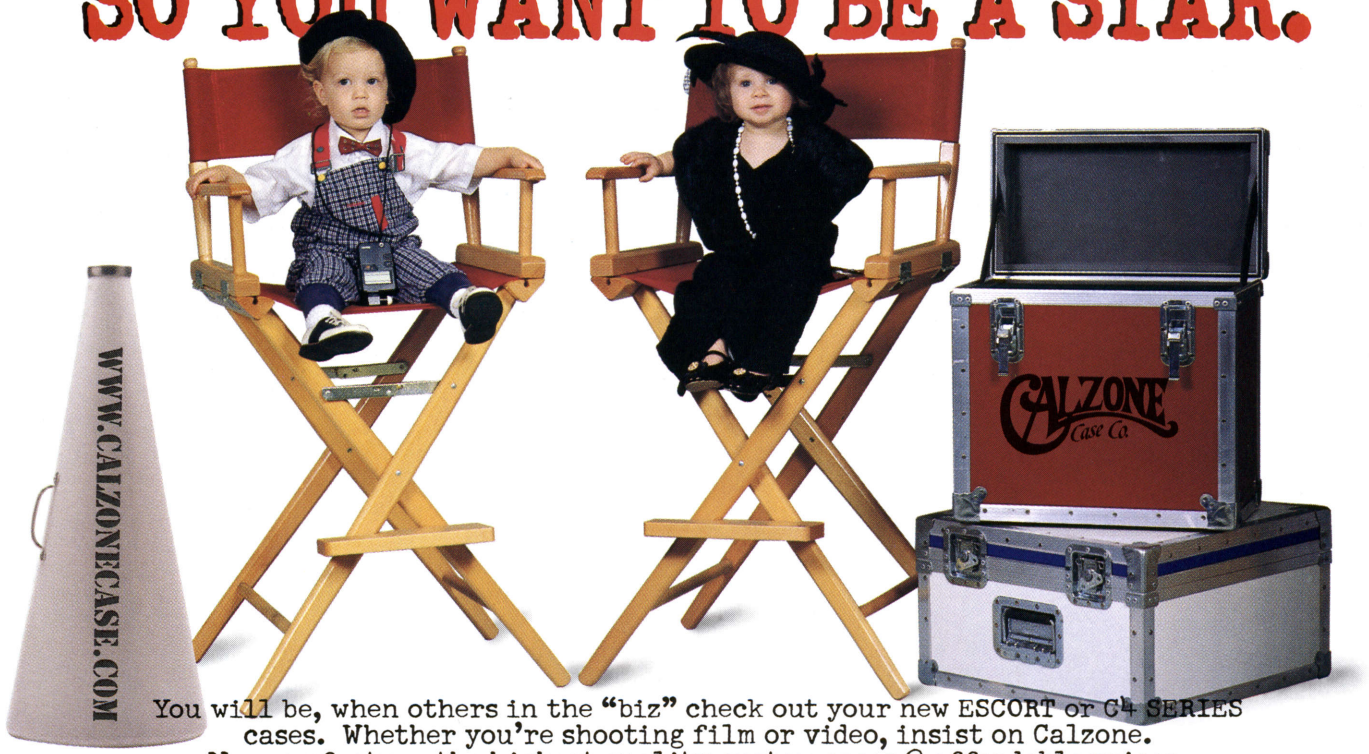

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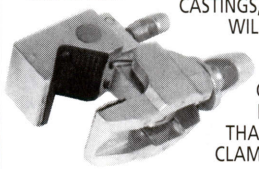

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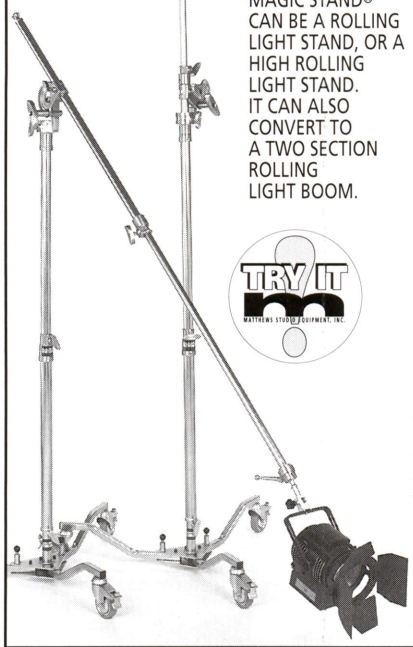

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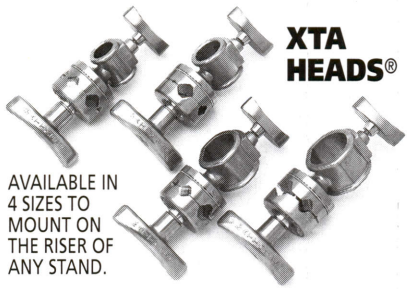

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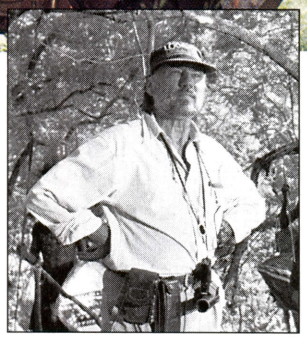

Photos by Frank Connor and Stephen F. Morley, courtesy of Paramount Pictures.

Remington (Michael Douglas) leads the hunt for a pair of killer carnivores in* The Ghost and the Darkness. *Vilmos Zsigmond (inset) found that the largely nighttime-set film offered plenty of opportunity to try his own brand of film noir lighting.

Vilmos Zsigmond, ASC
The Ghost and the Darkness

Nominated for an ASC Award, Vilmos Zsigmond has previously earned an Academy Award in 1977 for *Close Encounters of the Third Kind*, and garnered subsequent nominations for 1978's *The Deer Hunter* (which also earned him a BAFTA Award) and 1984's *The River*. He won a 1992 ASC Award for the HBO film *Stalin*, which received an Emmy Award nomination as well. Zsigmond's diverse resume also includes *The Sugarland Express*, *Deliverance*, *McCabe and Mrs. Miller*, *The Witches of Eastwick*, *The Crossing Guard* and *Assassins*.

The Ghost and the Darkness (see *AC* Nov. 1996) was filmed on location in South Africa (doubling for Kenya), taking full advantage of the anamorphic 2.35:1 format to capture rugged landscapes unique to that continent. Zsigmond chose to photograph the exterior scenes entirely on Eastman Kodak EXR 5293, which enabled him to shoot well into dusk without having to change emulsions. Nighttime scenes were captured on the 500 ASA 5298, which gave the cinematographer enough stop to utilize even Panavision's 11:1 Primo zoom — a favorite lens in his arsenal.

Zsigmond was able to bring a few of his key crew members — gaffer Bob Jason, key grip Michael Miller, Steadicam/operator Neal Norton, operator Joseph Urbanczyk and first assistant Dennis Seawright — with him to Africa, which helped to ensure that he would be able to communicate his needs effortlessly. However, the cinematographer was still forced to confront language barriers with the rest of the film's production team. "Many of the local electricians didn't speak English, and it was a major problem," the cameraman relates. "How can you do complex lighting when you can't tell people what to do? That hurt our production speed, and it's difficult enough nowadays, when everyone expects you to be a miracle worker."

Adding to the production's degree of difficulty was the fact that Zsigmond also had to shoot many sequences involving mature (albeit trained) lions. He recalls, "We did a lot of tests to determine how to film the lions doing different actions: running, attacking, hiding in the bushes. But it was difficult getting them to move from point A to point B. Lions are actually quite lazy animals, especially in the heat. They just lie down and do nothing." ◆

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Independents' Day

Hollywood hails the visions of self-sufficient, low-budget moviemakers at the Los Angeles Independent Film Festival.

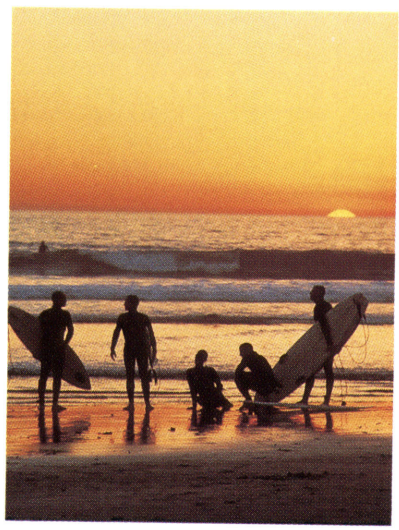
by Andrew O. Thompson

Despite the fact that Tinseltown has recently embarked upon a newfound love affair with independent cinema, countless filmmakers still must fight their way through the doors of even the smaller studios. Fortunately, intrepid indie mavericks looking to make an impression can secure a comfortable niche at the Los Angeles Independent Film Festival.

Now in its third year, the LAIFF, which was held from April 3-7, has evolved from fledgling festival to major exhibition venue for up-and-coming filmmakers, thanks to the efforts of event founder/director Robert Faust and his core crew — production manager Karen Kirkland, managing director Linda Rattner Kelly and programming director Thomas Ethan Harris. Submissions have increased steadily, with the 1997 installment landing over 1,000 entries — more than triple the number received for the first year.

Opening- and closing-night galas were held at the headquarters of the Director's Guild of America (DGA), with screenings serving as the centerpiece of each evening. The festival kicked off with Roberto Benabib's romantic comedy *Little City* (which Miramax films acquired for a seven-figure sum after its selection for the LAIFF), and closed with *Off the Menu: The Last Days of Chasen's*, a documentary by Shari Springer Berman and Robert Pulcini. The body of the festival — 21 features and 34 shorts — screened in conveniently adjacent venues: the Chaplin Theater at Raleigh Studios and the Studio Theater on the lot of Paramount Pictures. (The 1997 LAIFF was presented by Sundance Channel along with founding sponsors Eastman Kodak, the DGA and Raleigh Studios.)

Along with the inauguration of its annual audience awards (see box), this year's fest offered a community spotlight for various non-profit activist organizations; a new media forum exploring the potentials of digital technology; seminars on producing, music licensing and guild relations; and the second Kodak Close-Up series (presented in conjunction with



Photos by Ouri Ganor and Gillian Lefkovitz.

Right: ***A crew of surfers bask in an autumnal sunset captured on a California beach in*** **Ocean Tribe.** **Bottom:** ***Cancer-stricken surfer Bob (Vaughn Roberts) sits aloft his buddies' beaten-up station wagon while en route to a surfing expedition in Mexico.*** **Far right:** ***Director Will Geiger (with shaved head), cinematographer Harris Done (at right) and first AC Eric Done shoot a scene with an Arri 35-3 encased in a Hydroflex housing secured to a surfboard.***

LAIFF Audience Award Winners

Best Feature: *Sick: The Life and Death of Bob Flanagan, Supermasochist* — produced and directed by Kirby Dick.

Best Director: Will Geiger, *Ocean Tribe.*

Best Writer: Jon Harmon Feldman, *Lovelife.*

Best Short: *Fairfax Fandango,* directed by Marc Silverstein and Abby Kohn.

Photos by Peter Garfield

American Cinematographer), which featured sessions presented by ASC and Academy Award winner John Seale, ASC, ACS and Independent Spirit Award winner Roger Deakins, ASC, BSC.(Last year's series featured ASC members Allen Daviau and Judy Irola.) The LAIFF's second Indie Supporter Award went to Eastman Kodak sales rep Toni Robertson, who followed in the footsteps of completion financier John Pierson.

AC selected the following three films for in-depth coverage, in light of their cinematographic substance.

Ocean Tribe
Director: Will Geiger
Cinematographers: Harris Done, Jeff Neu

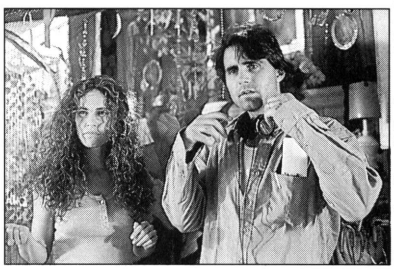
In *Ocean Tribe*, a group of boyhood surfing buddies return to their Northern California stomping grounds to spend time with their friend Bob (Vaughn Roberts), who is suffering from terminal cancer. The despondent Bob is in no mood for visitors, but his pal Noah (Gregg Rainwater) once promised to roust his friend out of any sort of hospital-induced funk, regardless of the circumstances. Toward that end, Noah and his cohorts kidnap their stricken comrade and take him on a road trip to Baja for a final foray in the surf.

Director Will Geiger has been surfing since childhood, and cinematographer Harris Done is an experienced diver, but neither of the Southern California natives was truly prepared for the taxing task of shooting on water. To research aquatic cinematography, they viewed the films *Point Break* [shot by Don Peterman, ASC, with surf cinematography by Yuri Farrant and Rob and Bob Condon] and *Big Wednesday* [Bruce Surtees with Greg MacGillivray, Jim Freeman, George Greenough and Dan Merkel] and perused issues of *AC* which featured these films.

Shot for under $1 million, *Ocean Tribe* is a 35mm production. But Geiger—a graduate of the Orange Coast College Film/Video Academy—had considered filming the surfing scenes in 16mm, a standard format for in-surf photography. Shooting in 16mm allows for longer-running loads of stock, as well as a lighter camera — a necessity since its operator has to constantly dive down to avoid both incoming waves and the surfers riding them. Tests, however, convinced Geiger and Done that blown-up 16mm shots looked liked stock surf footage.

The shortage of 35mm cameras outfitted for water photography almost forced the use of 16mm upon the filmmakers, but Geiger eventually acquired two Eyemos: a basic model purchased from veteran underwater cameraman Don King (*Endless Summer II*) and another from Ferra Camera

Above: ***Director Charles Weinstein (with hands in pockets) preps an interior shot in a squatter's abode (dubbed the Hellhole) with cameraman John Thomas (behind camera) for*** **Under the Bridge. Center:** ***The graffiti-strewn exterior of the abandoned warehouse in Brooklyn that doubled as the Hellhole.*** **Left:** ***Heroin-addicted hooker Kathy (Melissa Leo) doles out a dose of attitude to the ailing John (Zach Grenier).***



Photos by Sheryll Coulon and Eric Lasher.

Above: ***The confused Chrysty (Amy Brenneman) ponders her uncertain future amid strange surroundings in*** **Nevada. Near right:** ***Cinematographer Nancy Schreiber, ASC blocks out a shot under the sweltering, desert sun of Randsburg, California.*** **Far right:** ***Director Gary Tieche explains a scene to Brenneman inside the makeshift oasis set.***

Mounts that had been modified with a crystal sync motor, digital display and reflex viewfinder. This souped-up unit was reserved for longer shots executed with 35mm and 50mm lenses; the other was fitted with 17mm and 28mm lenses, since wide perspectives are preferable when shooting blind.

The surfing footage was captured in Southern California (Huntington Beach Pier, Trestles in San Clemente) and Mexico (San Miguel and Tatos Santos Island in Baja). Two cameramen would follow the same shot, albeit from landlocked and oceanic perspectives. On shore, USC film school alumnus Done shot with an Arriflex 35-3 outfitted with a 150-600mm Canon zoom lens. Surf cinematographer Jeff Neu filmed the surfers (at 36-48fps) from the water with the 35mm Eyemos; due to the cameras' small load capacities, the two units were relayed back and forth to maximize filming time.

Recounting this tag-team style of surf shooting, Done notes, "Jeff knows that at a certain frame rate he has five shots. He's out there getting beaten by the waves and diving under them. Then he pops up, squeezes off a shot and dives back down. Anytime *I* saw somebody looking to get a decent ride on a wave, I'd roll. If it turned into a good ride, I'd let it go, if not, I'd do a quick shut-off."

Explains Geiger, "Using the Eyemos, you can only shoot with 100' loads, which at 48fps gives you 35 seconds of shooting time. Jeff had to swim out in the middle of these huge waves, shoot for 35 seconds and then come back to the boat for me to take the camera out. I had to unscrew 28 bolts [from the housing designed by Dale Kobetich] — we couldn't use clips, because if the housing had opened up on a big wave, the water would have flooded the camera."

Done also shot dialogue scenes with the Arri 35-3 encased in a Hydroflex housing that was strapped to a surfboard for stability. However, the currents often sent actors, crew and equipment veering in different directions. To compensate, Done determined a means of filming wide shots from a boat. He would then cheat his close-ups. The cameraman notes, "We would get the actors to run into the water to get themselves all wet and then sit them down on an apple box on the sand. I would then get down on the beach handheld and create a lot of bucking water movements. Sometimes I'd even do some poorly framed shots so that [the camera] seemed difficult to operate."

Done utilized Kodak's 5248 and 45 stocks, as well as the since-discontinued, low-contrast 87 "to carry out the underexposed shadow area for some of the surf situations, since the contrast out there is so extreme."

Principal photography on *Ocean Tribe* occurred during September and October of 1995, a period known among surfers as "the bummer summer" for its lack of hang-ten conditions. In December, with only two days' advance notice, the production returned to Ensenada, Mexico, sans filming permits, to catch a massive swell coming in from Alaska.

Part of the reshoots in February 1996 also entailed Bob's burial-at-sea, in which his cohorts cart his lifeless body out to the ocean on a surfboard and send him into the watery depths. Explains Geiger, "We wanted a shot of the four of them around the surfboard as they tip it over and then swim beneath the waves and out of frame. Then we cut below the water to a shot of them carrying the body down. The third shot has them further down in the water where it starts to get black. Harris lets them go out of frame, and then

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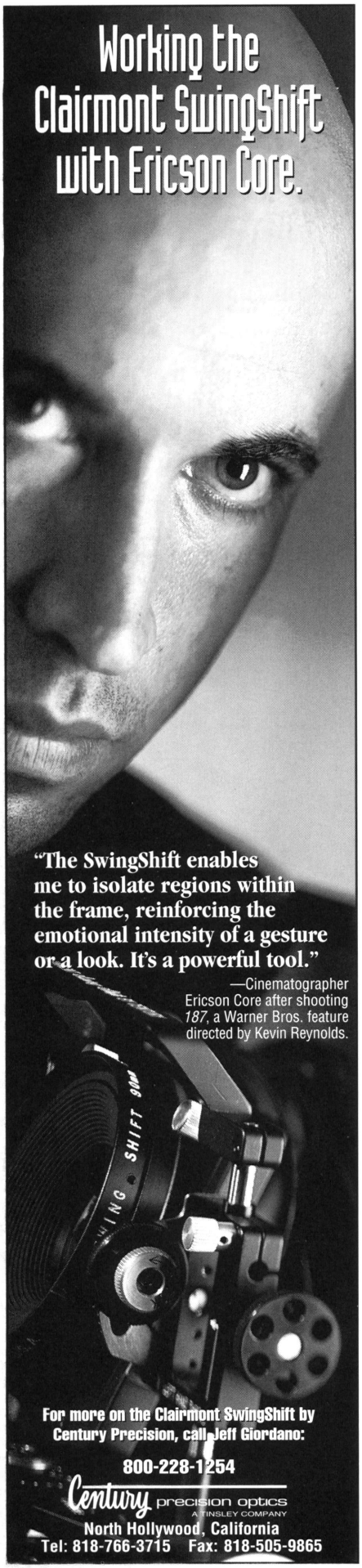

swims up towards the surface to reflect the theme of rebirth, and the idea that seawater is a healing element."

Adds Done, "We wanted something with a mystical feeling. I loved the underwater scenes in *Children of a Lesser God* [photographed by John Seale] — the shots of Marlee Matlin in the swimming pool. We were thinking that the beautiful, lyrical feeling of being among waves is like achieving grace."

Making matters more complicated was the fact that the burial scene required actor Vaughn Roberts — who had already lost 15 pounds to achieve the look of a gaunt cancer patient — to be nude in 55°F water. His level of discomfort meant that the filmmakers could only do three 35-second takes.

To capture the funeral scene, Done donned scuba gear and planted himself on the ocean floor (30 feet below the surface) and blindly aimed his Eyemo upward, thus violating a cardinal rule of diving. "When you're shooting up, there's the problem of trying not see you're own bubbles [within the frame]," says the cinematographer. "The first thing they tell you in diving class is never hold your breath because you want your body to adapt and process the nitrogen. But for the few shots looking straight up I had to hold my breath for as long as possible."

Geiger, meanwhile was outfitted with a snorkel, since he alternated between bobbing on the surface with the actors and submerging to survey the cameraman's progress. When Done was ready to start shooting, he would give a hand signal to the director, who would then swim out of the approximate frame. (The director later extended the scene optically to further enhance its ethereal nature.)

For Done, who's currently in Hawaii shooting second unit on the comedy *Krippendorf's Tribe*, working on *Ocean Tribe* only strengthened his respect for the art of surf cinematography. "Good surf photographers have to be great surfers in their own right," he says. "It's not just being able to swim and work the camera, it's also knowing how and where surfers catch waves. The person shooting has to be in the right spot for the surfer to drop in off the wave and then make a ride toward camera. You shouldn't be right where the wave is breaking, you want to be slightly after it."

Under the Bridge
Director:
Charles Weinstein
Cinematographers:
John Thomas, Ben Wolf

In *Under the Bridge*, life changes significantly for eight-year-old Eddie Manley (Matthew Weathers) after he flees his orphanage and ends up in a rag-tag community of squatters who eke out an existence beneath the shadow of Brooklyn's Williamsburg Bridge. As Eddie enters Hellhole, a derelict warehouse bordering the East River, he encounters a colorful cast of characters, including the wise fisherman Sammy (Damien Leake), a smack-addled hooker named Kathy (Melissa Leo from TV's *Homicide*) and John (Zach Grenier), the commune's ailing leader.

After Kathy's roommate Christine (Alley Ninestein) succumbs to a lethal overdose, the wandering Eddie takes up residence with the resentful prostitute. A bond slowly forms between the unlikely pair, and Kathy experiences a warmth she hasn't felt since losing guardianship of her own child. Eddie, however, is forced back into his boarding home after being arrested in a shoplifting spree encouraged by John's abusive, self-interested brother, Mikey (Bruce MacVittie). Though saddened by Eddie's absence, Kathy finally gathers the resolve to tackle her problems head-on.

Writer/director Charles Weinstein's script is based upon his personal encounters with a loose-knit community of transients he met during a "lost period" of his life some years ago. When Weinstein later found himself in search of feature material, this experience immediately sprang to mind. Having spent a year interacting in their world, the NYU film school alumnus felt that he could portray their plight more sympathetically than some other non-fiction filmmakers

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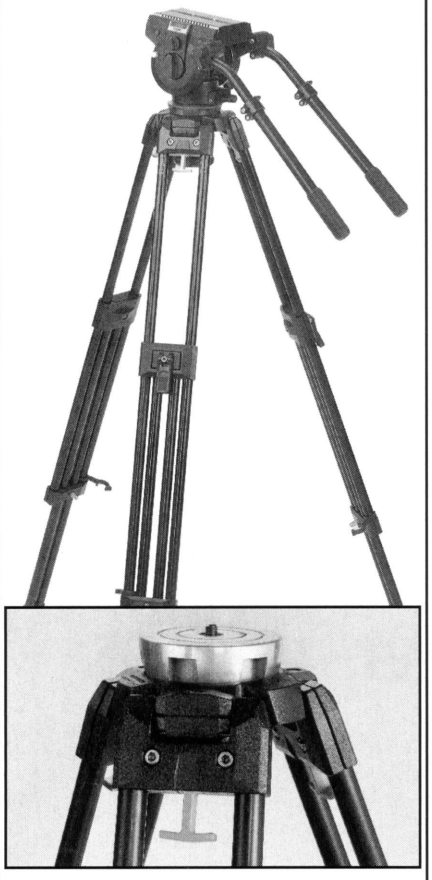

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who have tackled the subject.

Recalls Weinstein, "There were these documentaries about homeless people in the Eighties that were very in-your-face. Having been with these people, that's not how I had known them; they were friendly, they embraced me, they shared their knowledge. I didn't want to take the obvious approach, which to me always felt as if [it conveyed a sense of] a distance. I didn't want to separate the viewer from the subject, I wanted to bring the viewer into the subject."

Performing cinematographic chores on *Under the Bridge* was Ohio native John Thomas, an alumnus of NYU's graduate film school who earned his first feature credit on Whit Stillman's directorial debut, *Metropolitan* (1990). The duo's next collaboration, *Barcelona*, earned Thomas a 1995 Independent Spirit Award. Last year, he received an Emmy nomination for his work on the HBO film *Norma Jean and Marilyn*. His credits also include *The Night We Never Met*, *Palookaville*, *Freeway*, *Still Breathing* and the upcoming *Dead Man on Campus*.

Though Weinstein wanted to avoid a pure documentary style, he did envision *Under the Bridge* as a grainy, black-and-white Super 16 film. During a February 1994 scout session, the director introduced Thomas to the location — a small cluster of abandoned, buildings in Brooklyn — only for the cinematographer to convince him that the dilapidated, graffiti-strewn gutted structures would appear best on 35mm color stock. The setting was so vivid that the film didn't need a production designer (which was fortunate, since the budget couldn't support one). Thomas later realized that the bright backdrop came across a bit too vividly on film. He notes, "When it was fresh, some of that graffiti would just pop. We actually tried to bring some of it down; we had an art person use a Hudson's sprayer filled with some brown goo. We didn't want to obliterate it, but we did spray it down so it wouldn't totally draw the viewers' eyes away from the actors."

Thomas' biggest battle was in illuminating cavernous warehouses (some 100 yards in length) which only had small windows allowing in sunlight. With his limited lighting package, the cameraman resorted to method he terms "slash-and-fill." He elaborates, "We'd let the sunlight come through in slashes. When the sunlight gave up, we used 1,200-watt HMI Pars—which can get very spotty—for a hard sunlight effect, and added less fill. The Pars were great because we could plug them into the wall whenever we needed to. Our Primo lenses came in handy when we had direct sun going through the background or when we were actually looking at the windows. I'd assumed that we'd get flared to death; it was a great way for me to test what I could get away with. On a larger film I would have played it safe by placing ND filters on the windows."

As for the firelit night exteriors, Thomas offers, "Some of the scenes around the fires were supplemented with flicker machines and gelled lamps to spread that light out. In that case, we used 2K Mighty Moles with some colorful fire effect gels to try to continue that flicker effect. For night exteriors, I'd always go with tungsten Pars; I found out from my gaffer training what you can run on a small 5,500-watt generator, and what can give the greatest light output for the lowest amperage. And since New York is a big theater town, there are lots of theatrical rental places where you can rent Pars for incredibly cheap prices."

Under the Bridge was shot primarily on short ends acquired from the television drama *Law and Order*, a show on which Thomas had formerly as a gaffer for one season; the primary stock for both day and night interiors was Kodak's 5296, with some limited use of 93. For shots of the squatters from the perspective of a Hi-8 video camera being operated by documentarian Rube (Michael Imperioli), Thomas utilized Double X stock. Weinstein stresses that the greatest boon to the production was the graciousness of Panavision's New Filmmaker Program, which provided GIIs and other Panaflex cameras, as well as a full array of Primo lenses, free of charge. The

director had sent a copy of the script to Phil Radin, executive vice president of marketing at Panavision Tarzana, who recommended them for the program.

Principal photography took place over 22 days in March 1994. Some 70 percent of *Under the Bridge* was in the can when the production ran out of funding. The remaining footage was eventually shot intermittently during a three-week period from November through December of '94. By this time, however, Thomas had committed to another project, so he suggested that key grip Ben Wolf pick up where he left off.

"Though I stayed within the look John Thomas created," comments Wolf, "Charles allowed me to explore variations. When the sickly John (Zach Grenier) suffers from terrible nightmares, I wanted to emphasize his illness by making his face resemble a skull. Since this metaphor might have been simplistic in white light, I made the scene more theatrical by making the key full blue and the fill light double blue. Previously, the film's moonlight key was ¼ or ½ CTB; I stepped out of that methology, but it felt right."

When matching an earlier scene of John's dalliance with the prostitute Gloria (Karenjeune Sanchez), Wolf's lighting schematic fell victim to the production's most humorous mishap. Says Wolf, "I shot a fantasy scene for the end of the sequence in which Gloria walks outside, at first fully clothed and then completely naked. I had a reflector working inside and a PA outside with a broken mirror for a kicker on her exit. But when she opened the door and stepped into the bright December sunshine, there was no kicker. The PA didn't expect to see a nude woman in that cold weather, and had dropped the mirror in total surprise."

Weinstein says that Thomas' experience with first-time directors was an invaluable asset to *Under the Bridge*. He recalls one instance when the cinematographer's enthusiasm even outlasted a freezing 19-hour day shoot, just to catch a vivid sunrise. Says the director, "I remember seeing John out on the location on the East River at about

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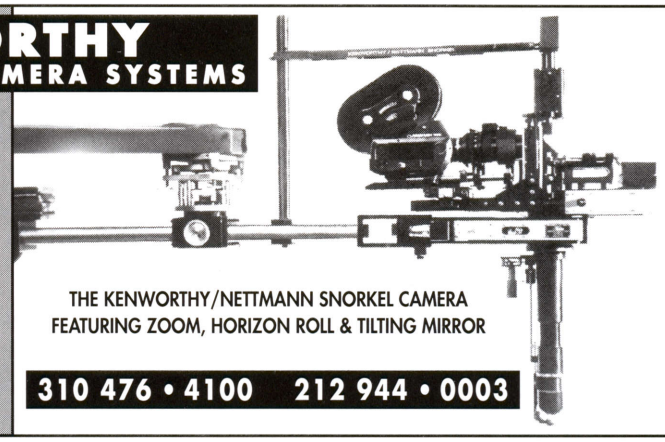

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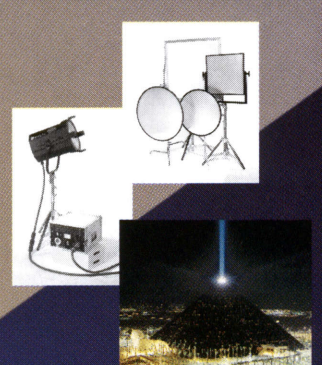

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five a.m. He said to me, 'In another hour, the sun's going to slowly start climbing till it's just behind Williamsburg Bridge. If you, the assistant cameraperson and I stay out here just a little while longer we'll capture something special.' I'm really happy that we were able to get some of those kinds of shots, especially on a low-budget film."

Nevada
Director: Gary Tieche
Cinematographer: Nancy Schreiber, ASC

Nevada opens with a shot of an attractive young woman, Chrysty (Amy Brenneman), who strides purposely along a dusty stretch of desert highway, carrying only a suitcase. Her pilgrimage detours to Silver, Nevada, a tiny, isolated town seemingly populated solely by women. But as it turns out, the male members of Silver's populace are employed at the Hoover Dam, and see their significant others only once a week. After aiding June (Bridgitte Wilson) through a painful childbirth, Chrysty becomes enmeshed in the lives of the town's other women, to the delight of some and the chagrin of others. Parochial concerns, however, drive the overbearing Sheriff McGill (Kirstie Alley) to unravel Christy's troubled past, revealing that she is using the other women's predicaments to reexamine the choices she's made in her own life.

Nevada was written/directed by L.A. native Gary Tieche, an alumnus of the film schools at San Francisco State and UCLA, where he shot student films while earning his MFA in screenwriting. In initial discussions with cinematographer Nancy Schreiber, ASC (*Chain of Desire, Scorpion Spring, Lush Life, Visions of Light, The Celluloid Closet*) Tieche indicated his desire for a leisurely-paced film somewhat akin to early Seventies American cinema. The two studied the pacing and compositional aspects of *The Last Picture Show* [shot by Robert Surtees, ASC] and *The Passenger* [Luciano Tovoli, ASC, AIC], as well as the alternating use of wide and close lens work in *Tender Mercies* [Russell Boyd].

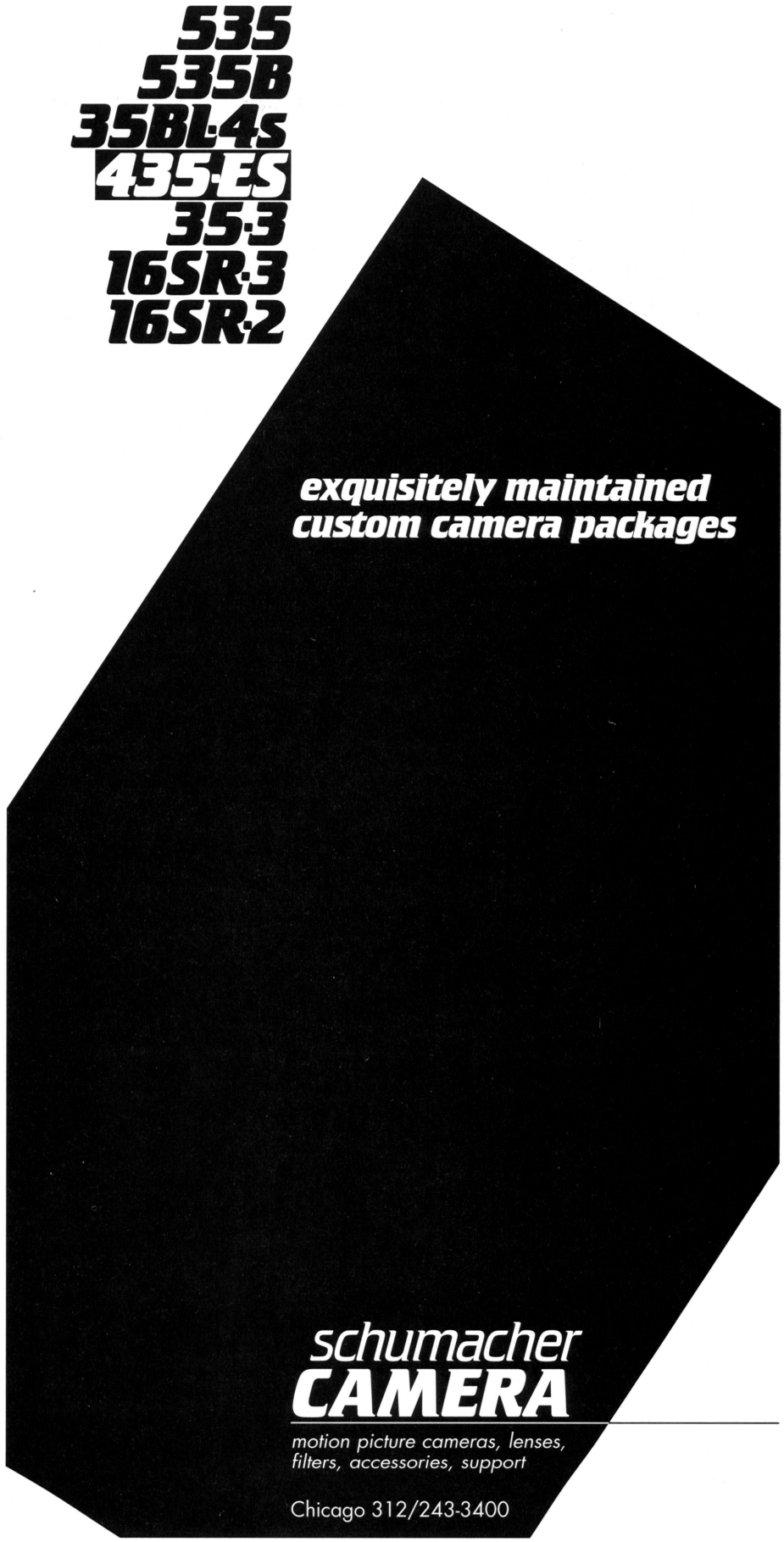
Says Schreiber, "Gary re-

ally wanted [the ambience] to be mystical and atmospheric. Lyrical dolly moves or Steadicam shots characterized the movement of the women through the town; the confrontational scenes were always done handheld. It's a very internal film. Even though there are landscapes and the main town becomes one of the characters, *Nevada* is mainly about what's going on in these women's lives, so there's an abundance of close-ups and longer-lens photography."

Finding an adequate desert location was no easy task. The film's less than $2 million budget did not allow the reconstruction of an entire town, but Tieche had a specific vision he recalled from childhood memories of his grandfather's home in the Mojave Desert. (*Nevada* ended up shooting for 23 days last August in the former mining town of Randsburg, California in the Mojave.) Says Tieche, "For all of the interiors, I wanted very static shots which used the architecture to break up the spaces so that there were frames within frames. Out there [at my grandfather's home], there were all of these little boxy cabins that they would keep adding onto; you would get these great little spaces that were always broken up.

"We did make some changes when we got to the location, but the town had to have a little center, and appear as if it was in the middle of nowhere. We found a lot of little places where you could shoot in one direction, but would have to avoid others. In the town we ended up getting, we could shoot on the location for about 270 degrees without seeing something that I didn't want."

What Tieche definitely didn't want to see was the picturesque, panoramic expanse of blue sky commonly displayed in films set in the desert. Reasons Tieche, "[When the film starts], Chrysty is walking through this bland, ugly Mojave desert that's nothing spectacular. As she gets caught up in this town, she begins to notice that at sunset, sunrise and other points during the day, the desert is very beautiful and poetic. She develops a respect for that which she eventually passes onto her kids at



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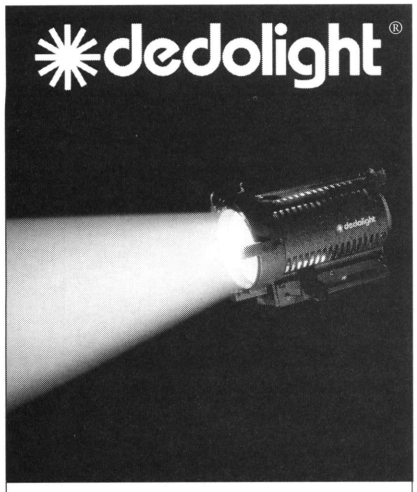

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the end. When you watch the film, you don't see sky very much — mostly just the lower, hazy part of the sky."

Schreiber utilized a Panaflex outfitted with Primo lenses, and shot all of her day exteriors through a sepia filter to achieve a slightly dirty, orangey-brown tone. For these scenes, the cinematographer employed Kodak's 5293, which she overexposed slightly to enrich the scene's black shades; she usually employed a ¼ black ProMist or light Mitchell diffusion filter.

Also contributing to the controlled earthtone palette was a brown or mustard wash that Schreiber asked the film's production design team to lather over the town's structures. During a scouting session, she had taken stills of Randsburg to determine its daily patterns of natural light. Much to her chagrin, the cinematographer found that all of the buildings were painted either white or silver, a natural precaution to reflect as much heat as possible so that the residents could endure the average daily temperature of 120°F. But such surfaces would be too reflective for the camera and the subdued palette desired by Schreiber.

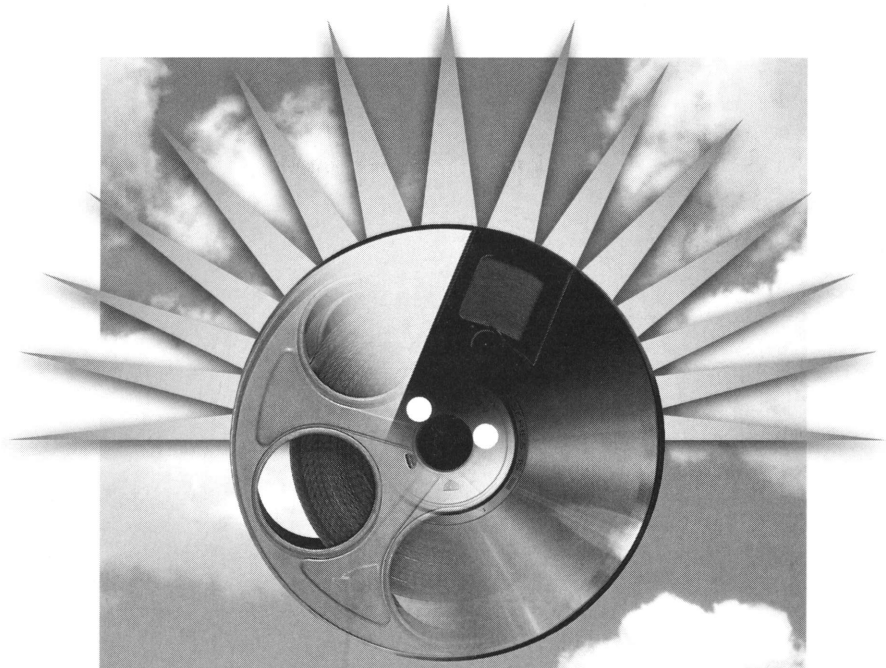
Notes the cinematographer, "I felt that black and/or white buildings should not exist in this ambiguous town in the middle of nowhere. The lives these people inhabit are not black-and-white; they live in the gray area. As it was a color movie, and I could not shoot in shades of gray, I wanted to go into a range of earthtones. [Production designer] Bryce Perrin did a great job of painting where he could and finding clever ways to control the palette."

Schreiber shifted her photographic style subtly when the film's focus switched from the town's earthy exteriors to more vibrant interiors. One citizen of Silver, Ruby (Dee Wallace Stone), runs a festive tent bar where the women congregate every evening. The tent's slanted walls precluded a conventional lighting schematic. A limited grid had to be constructed around the apex; from this Schreiber hung small Tungsten fixtures (100 to 650-watt). The tent's warm, amber hue was achieved with ¼ CTS gels. To supplement the Fresnels, she and and designer Perrin bedecked the tent's interior with tiny carnival sockets, colored Chinese lanterns, small lamps and candles as well as a blue buglight zapper. Schreiber employed 5298 stock, overexposing by ⅓ of a stop.

Scenes set in Chrysty's Idaho home — personal dream sequences, flashbacks of her family and visions of the ongoing plight of her deserted loved ones — were shot with daylight on Kodak's Vision 320 stock sans an 85 filter, a combination which lent the footage a cool blue hue.

A four-page love scene between Chrysty and married dam worker Rip (James Wilder) set at the Hoover Dam was saved for the final day of filming. In the script, this tryst occurs at night, but since *Nevada*'s low budget could not afford the extensive setups needed to illuminate the dam and the surrounding area, the sequence had to be shot at dawn. Schreiber recalls, "The light comes up very quickly, so I did all of my wide shots when it was still very dawnlike. By the time I did the close-ups the sun was getting higher, so we built negative fill 'tents' around the actors to control the light. I also shot through nets placed behind the actors, cheating these close-ups into the shady part of the dam. Using long lenses to throw the background out of focus, it was a mad dash to finish this four-page scene before the quality and color of the natural light shifted. The grips, electrics and camera department worked with amazing speed, especially considering that this was the last day of the shoot and our call time had been 3 a.m.!" ◆

The 1998 LAIFF will be accepting submissions from October 13–January 16. All entries must be submitted on ½" VHS tape. As this is a showcase of American films, at least two of the prinicipals (writer, director, producer) have to be American residents. Films must have been completed after January 1, 1996. For further details and submission forms call (213) 937-9137 or check out the LAIFF website at www.laiff.com.



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Epsilon: Motion Control to the Max

An experimental Australian film, shot primarily via motion-control, tests the limits of a versatile new system.

by George Turner

It's hardly surprising that an Australian production team has made the first live-action picture to be photographed almost entirely with motion control. The film is entitled *Epsilon,* and the revolutionary new system used to shoot it — a rig run by parallel processors perfected and patented in South Australia — has never before been used on a feature.

Even in the earliest days of cinematic history, ingenious Australians have found ways to break away from the mainstream ideas of Europe and America. Aussies were producing staged narratives as early as 1897, five years before Edwin S. Porter made *The Life of an American Fireman.* In 1900 — more than a decade before America produced even a three-reeler — our friends down under pioneered multimedia production in *Soldiers of the Cross,* a 150-minute show composed of 13 rolls of movie film, 200 colored glass slides, the screen's first original musical score (performed live) and a live narration. 1906 saw the debut of *The Story of the Kelly Gang,* which boasted a running time of more than an hour.

Epsilon, which the film's producer-director, Rolf de Heer, calls "an intergalactic love story," is the latest addition to this history of innovation. Miramax acquired rights to the film for the United States, United Kingdom and South Africa in the spring of 1995 at a record price for an Australian film, but sadly the picture itself has vanished to those hidden shelves where movies often languish after an executive shuffle. Still, the unusual process of its making is worthy of examination.

In this abstract tale, the part of "She" — a traveler from the Epsilon star system — is played by a beautiful brunette named Ulli (pronounced Ooly) Birve; "Man" is essayed by the likable and intelligent Syd Brisbane. The film begins with "She" having fallen out of the stars, naked and alone, only to find herself in the outback with no knowledge of where she is or how she got there. (Nudity, incidentally, is no big deal in Australian films.) "She" soon meets "Man," a solitary camper. Moving out of space and time is normal for "She," but not for the puzzled earthling, who dresses her in his extra khakis and tries to help her get home. The pair have a series of adventures in constantly changing times and places — including Flinders, Australia and the American cities of Las Vegas and Los Angeles.

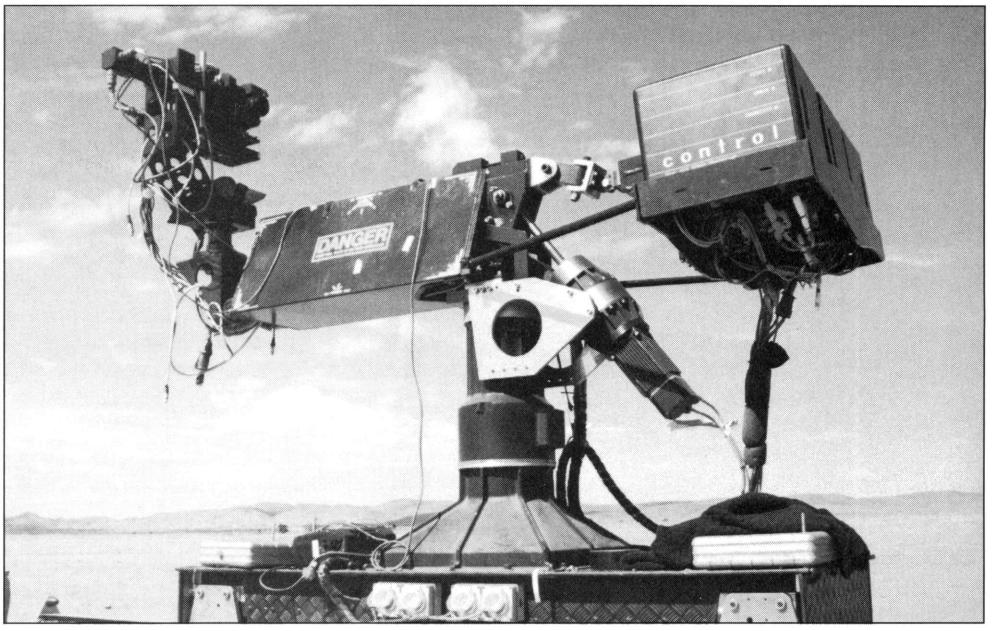
De Heer has proven himself to be a director of notable talents. His unblinkingly frank yet quirky *Bad Boy Bubby* won a 1994 Grand Jury Special Prize at the Venice Film Festival, and earned him Best Director and Best Screenwriter awards from the Australian Film Institute. That film was shot in the South Australian capital of Adelaide for $840,000 Australian (about one-fifth less than American dollars). De Heer always uses small casts and crews so that he can afford a long shooting schedule, even on a micro-budget. While working on *Bad Boy Bubby,* he saw a Mitsubishi TV commercial in which landscapes seen through a car window changed seamlessly. Fascinated, he later learned that the spot was shot with the Control camera system designed by Digital Arts Film & Television Pty Ltd. of Adelaide.

De Heer saw the system as a way to achieve new visual horizons. Conjuring up the idea for *Epsilon* in one night, he obtained financing from several sources: the Italian production company Fandango; the South Australian Film Corporation in Adelaide; and the Australian Film Financing Corporation in Melbourne. *Epsilon's* budget was about twice that of *Bubby,* and a production schedule of one year was allotted. At the start of the shoot, de Heer borrowed a temporarily idle Control rig and filmed some scenes in the Flinders Ranges. When the rig was needed for an English documentary being filmed in the United States, the *Epsilon* company tagged along and shot scenes in Las Vegas and Los Angeles. Later, with the cast, crew and equipment packed into three four-wheel drives with trailers, the production accompanied Digital Arts on a shoot for a Disney Channel documentary which covered much of northwest and west Australia. The company eventually obtained full-time use of a Control unit for their project.

Digital Arts was developed by Sean Caddy and Michael Carroll in 1989 as a provider of 3-D animation and special effects, and soon became heavily involved in the development of robotic camera systems. The *Epsilon* personnel made their headquarters at Digital Arts' facility in Beverley, S. A., a 6,000-square-foot building containing a studio, off-line video and film editing suites, sound post-sync facilities, software and animation areas, workshops and offices. Digital Arts also provided some of the project's key personnel, including co-producer Caddy, creative collaborator and second-unit director Carroll, director of photography Tony Clarke, assistant cameraperson Helen Carter, software designer Jeremy Webber, and mo-

tion-control technicians Patrick Walsh and Peter Laan. A very small crew was utilized throughout production.

On a trip to Australia in late October 1994, I was flown from Adelaide to an "outback" *Epsilon* location in the Flinders Range, about 200 miles away. (But not, I might add, without some difficulty. About halfway during the journey, the door of the five-passenger plane ripped open, giving way to a maelstrom of atmospheric turbulence. I happened to be sitting in the seat next to the door, and might have gone on a solo flight of my own if the two ladies seated in front of me hadn't had the presence of mind to hold me down. After a forced landing — there's plenty of open space in the outback— repairs were made and we proceeded on to the location.)



Above: ***The Control system rig with three-foot arm.*** **Left:** ***Cinematographer Tony Clarke prepares to execute a dolly shot via computer.***

It is impossible to convey in words the vastness and eerie desolation of the outback. The driest part of Australia's driest state, its aridity makes California's Mojave Desert seem like an oasis. The buzzing of flies is constant, although in daytime there appears to be nothing for them to subsist upon. There are cattle herds not too far away, and at night wild animals emerge in great variety. Occasionally, a stiff gust of wind scatters the flies, but that is of little comfort when sand driven at 60 miles an hour bites into one's skin. Despite these inhospitable conditions, the spectacular landscape offers a wealth of visual beauty amid rows of sharply defined, saw-toothed peaks.

Atop a hill in a basin surrounded by jagged peaks, members of the *Epsilon* company were tackling their tasks with enthusiasm; the crew was so excited to be creating an unusual and potentially important movie that they seemed totally oblivious to heat, flies and sand. The Control rig carried a Mitchell Mark II camera along dolly tracks, moving eerily toward co-stars Birve and Brisbane (both of whom had small roles in *Bad Boy Bubby*) as the filmmakers enacted a scene at the campsite. The tall, lanky de Heer smiled while ordering several takes in his soft-spoken voice. Each time, the camera and the players repeated their moves identically. When visitors commented that the dialogue was delivered flawlessly each time, actress Birve noted, "We're both from the stage — we don't forget lines."

During a lunch break, de Heer discussed his decision to use the Control system throughout most of the picture. "It lets us repeat movements precisely, and not only as they occur in real time. For example, we can repeat a movement in real time and then assemble it over eight hours as a time-lapse sequence. That creates the feeling of shots made at the same time. It allows us to have an actor doing something in a shot while time-lapse stars run by in the background." At the studio session for screening dailies, we had viewed several takes of such a sequence, and found them to be coordinated perfectly.

"This shot you're seeing now is not like that," de Heer continued. "It's just a single pass-through time shot, but we're using the motion-control equipment anyway, because we can obtain a certain smooth look that integrates very well with the other shots. We're even using motion-control for all of the moving camera shots which could be done by conventional methods. This way, the human error of camera movement is eliminated. There are just a few scenes where we had locked-off

cameras and didn't use motion control.

"The Control system can also do many other things that conventional camera systems can't," de Heer enthused. "It's creates a new type of film grammar. The camera can move in a particular way in real time, and that movement can then be reproduced at one-six-hundredth of that speed. It extends film, because there are no rules. I can play with time and space — the heavens can move!"

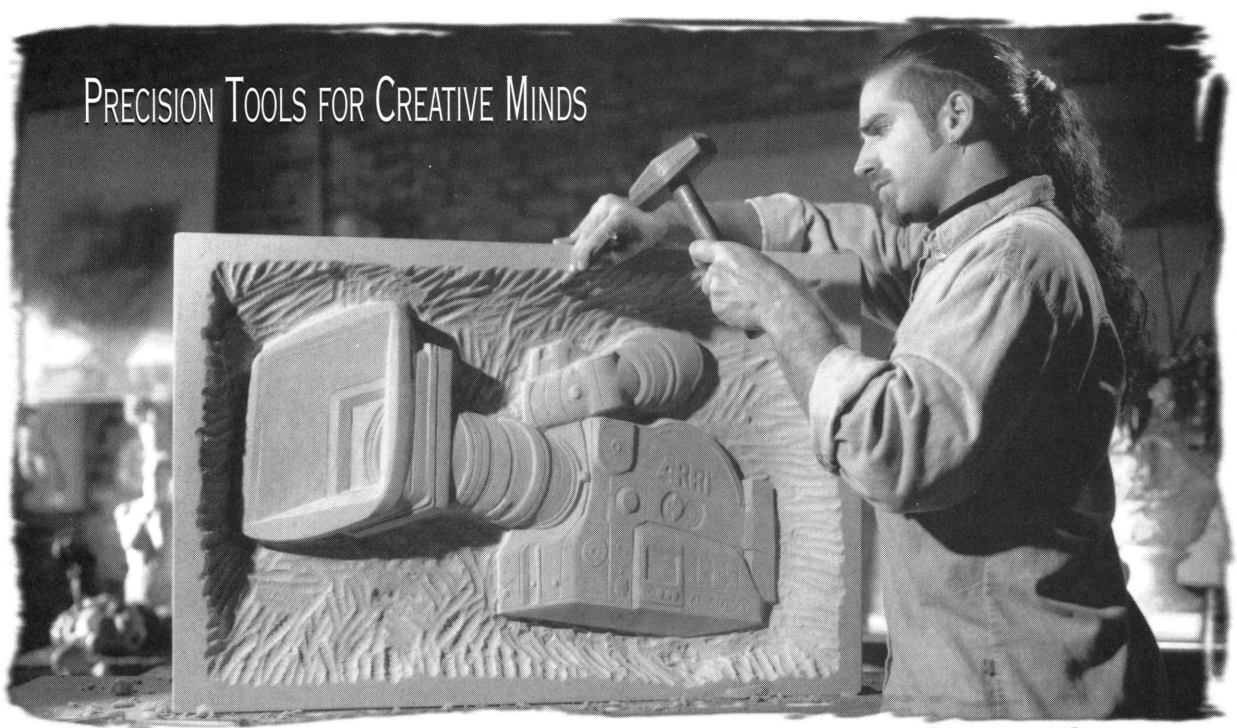
Cinematographer Clarke described a four-minute dialogue scene the crew had filmed on St. Mary's Peak at Flinders over a stretch of 72 hours. "It's actually 13 separate shots, layer on top of layer. It can be strange to watch — there are no bumps! The camera hasn't been as completely free as this in a feature film before. This is really a baby system."

Digital Arts co-founder Caddy explained, "At the moment, we have three prototype Control rigs in commercial use. Two are field portable systems like this one, which typically provide pan, tilt, track, film pull-down, zoom and focus. The other is a larger crane-based system which provides the above functions as well as the ability to lift and rotate. The crane rig can be configured with various crane-arm lengths, from three feet up to 13 feet in length, from a column that has a custom dolly which runs on a custom track. This uses pieces of precision track, so if you take the gear somewhere you don't have to take the track with you; you can obtain it when you get there. It's available anywhere in the world.

"The crane is quite another thing. The moving part of it weighs half a ton, and we can fly the crane through a full revolution in three seconds, which is frighteningly fast if you see it going. It can move down tracks at more than six feet per second while it's doing this! We haven't yet built enough track to enable it to get up to full speed."

To operate the rig, Clarke utilized a laptop PC which allowed him to control all of the unit's functions. "The black box [that the rig] is sitting on contains our specially designed in-house electronics, which actually control the axes and contain their own computers, which do the motion control part of it. The PC itself is used just to drive the operator's console. Underneath it are two additional computers which share the work, and there's a third one inside the piece itself. There are a wide variety of different axes in it, and we can control a variety of cameras."

Caddy and Carroll provided more information on the Control systems, which have only recently been granted patents in Australia and the United States. "Everything that you see has been developed in-house from scratch," Carroll revealed. "We design our own electronics, and we've done our own programming. The system has been designed from the ground up — there was nothing when we started, and we haven't used anyone else's system as a model. Being a small company, we've tended to build new systems from the remains of old systems. We're considering doing one that



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will provide quite a number of enhancements to the Control system to improve its ease of operation and its reliability in the field.

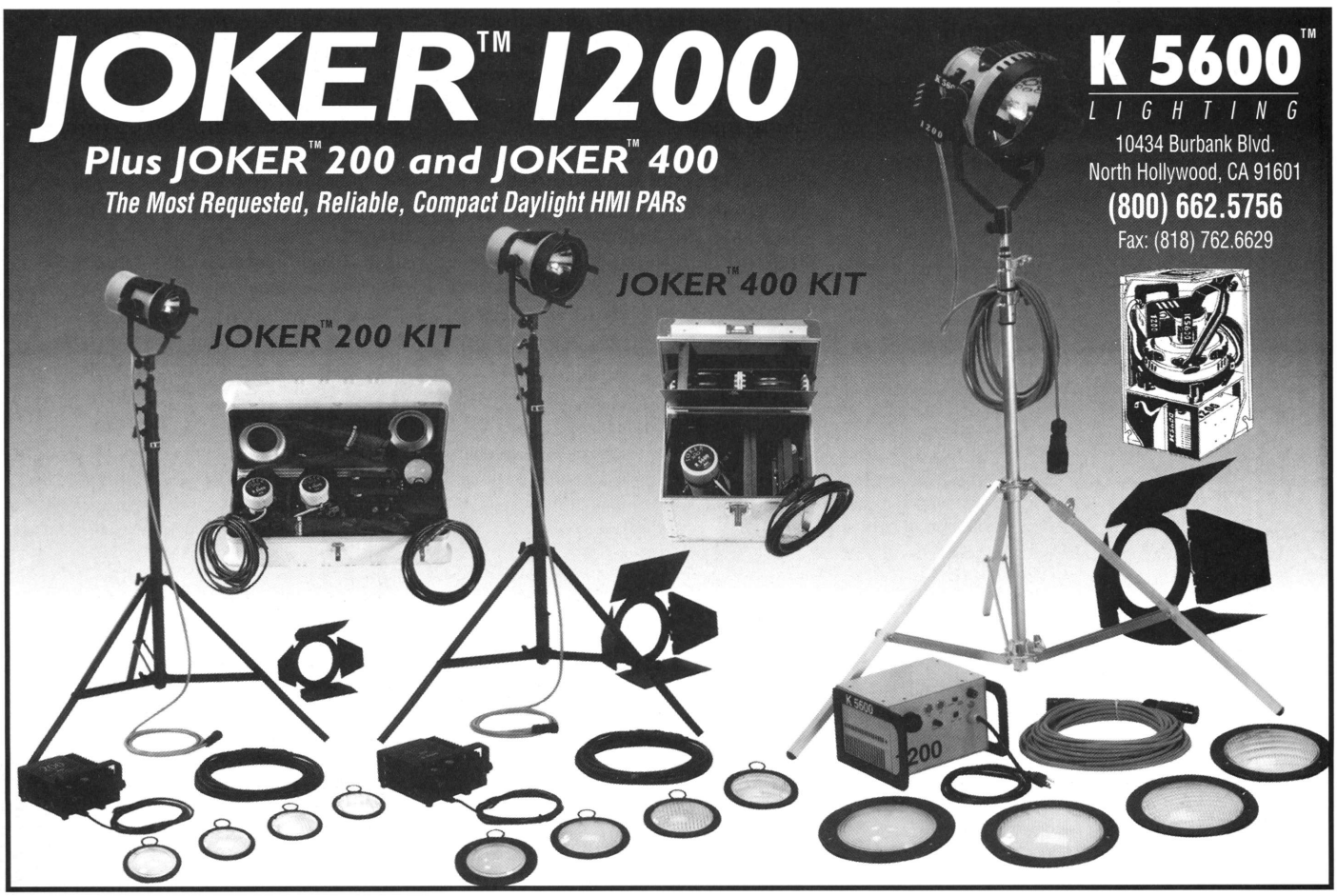
"Our real-time crane, which is larger and heavier, needs a custom-built track strong enough to carry the load. It's a lot more difficult to do with motion control than with conventional equipment. The way the forces act on the system is different, and that's why we design the mechanics and the whole works in-house. We have a guy who designs circuit boards for us.

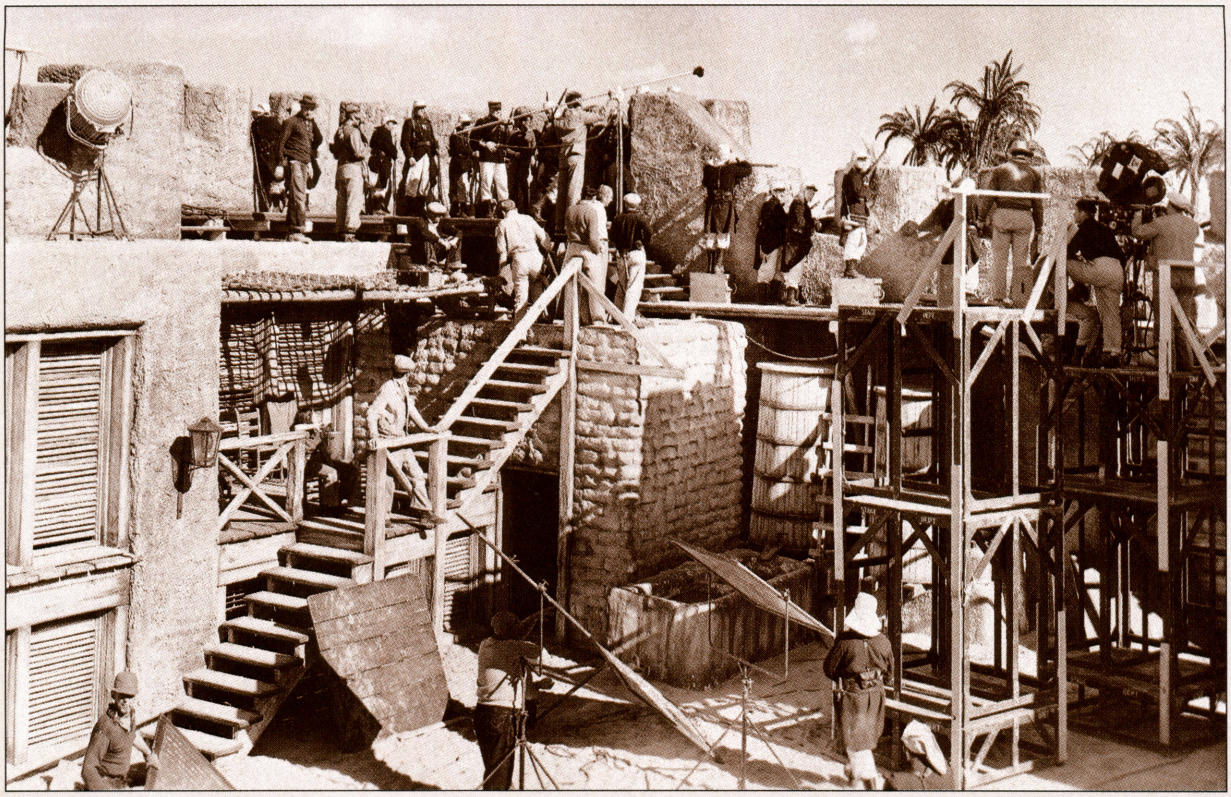
"All systems can work in fast real time or stop motion and are repeatable. Our systems are unique in several ways. First, they use parallel processing computer architecture which enables us to provide as much computer power as is required in any configuration. They also use a highly developed graphic user interface (GUI) developed with the active participation of a cinematographer, so that even complex shots can be set up quickly and previewed and adjusted in real time. The laptop PC is used only to run the user interface; all of the serious computing is done by Digital Arts' proprietary electronics. In addition, the rigs can be set up very quickly, since no actual programming is required; all controls are 'point and click.' All electronics are designed and built in-house to military specifications, and are extremely rugged and reliable. Finally, the system is fully portable. It can travel in a four-wheel drive vehicle or van, and can be flown around the world as excess baggage."

Director de Heer was most recently preparing a high-budget project based on his childhood adventures with his Dutch immigrant family of five, who traveled the wilds of Australia on his father's 1942 Harley-Davidson and a sidecar.

Meanwhile, the Digital Arts method has subsequently been used to create a 15-minute film about a monumental tourist attraction — the Desert Wildlife Park and Botanical Gardens — recently developed at Alice Springs, located in Australia's Northern Territory. A museum, restaurant, hiking trails and theater will all be part of an experience of evolution, revealing the development of the Australian continent over 600 million years. "We have worked in every state of Australia, including some rugged environments — snow, dust, humidity, heat," commented Caddy. "About half of this film comprises multi-layered sequences involving digital compositing of motion-controlled images, including a 3-D animated, 30-second sequence of the earth's formation, which is being rendered at a resolution never before attempted in this country. The process will include digital compositing, using Cineon and Matador, as well as in-camera motion-control. It will push our limits in several ways."

Plans are now afoot to shoot this production in Super 35 to be enlarged by CFI in Los Angeles for projection. It will then be transformed into the VistaVision format for exhibition on a 50-foot screen. ◆





Producer/ director William A. Wellman (wearing the beret beside camera at extreme right) lines up a shot inside the fort built in the Arizona sand dunes.

Beau Geste: A Desert Classic

Director William Wellman enlists ASC cameramen Theodor Sparkuhl and Archie Stout for an arid filmmaking adventure.

by John Andrew Gallagher and Frank Thompson

William A. Wellman's 1939 version of *Beau Geste* is a classic example of a vigorous moviemaking style that is now virtually extinct. With its larger-than-life canvas, which manages to be alternately rousing and romantic, mysterious and sad, *Beau Geste* ranks as one of the finest adventure films of its era.

From the outset of the project, however, Paramount Pictures had simply desired a scene-for-scene remake of the acclaimed 1926 silent adaptation directed by Herbert Brenon. That film had been based upon the 1924 novel by Percival Christopher Wren, a British soldier of fortune turned author. Wren served in the British Army in India before joining, and then deserted, the Foreign Legion. In Africa, he distinguished himself as a fencing champion, and at the outbreak of World War I joined the Indian Army. However, recurrent malaria relieved Wren from duty, and he retired in 1917 to devote his life to writing.

The immense popularity of Wren's *Beau Geste* made a movie sale inevitable. In March of 1926, director Herbert Brenon marched 2,000 men into Buttercup Valley (a white-sands desert area outside Yuma, Arizona), kept them there for three months in "a womanless paradise," and emerged with one of the greatest, most profitable epics of the Twenties.

On April 10, 1936, Paramount announced that *Beau Geste* would be remade in Technicolor, directed by Henry Hathaway, written by Grover Jones, and starring Gary Cooper. The studio, discouraged by the approach of summer — it's always best to avoid the desert during periods of 130° heat — announced on May 30 that production on the remake would be postponed.

In June of 1937, *Beau Geste* was revived, with W. P. Lipscomb writing the script for producer Lucien Hubbard. The cast was to include George Raft, Ray Milland, and Richard Arlen as the Geste brothers, Oscar Homolka as the Sergeant, and Frances Farmer as Isobel. Henry Hathaway soon returned to the project, Bertram Millhauser penned a new script and production was earmarked for that November. But another year would pass before *Beau Geste* landed in

the hands of "Wild Bill" Wellman.

Over the course of his career, which lasted from 1919 to 1958, Wellman directed some of Hollywood's most dynamic and enduring classics: *Wings* (1927), *The Public Enemy* (1931), *Wild Boys of the Road* (1933), *The Call of the Wild* (1935), *A Star is Born* (1937), *Nothing Sacred* (1937), *The Ox-Bow Incident* (1943), *The Story of G. I. Joe* (1945), *Battleground* (1949) and *The High and the Mighty* (1954). In early 1938, Wellman signed a five-year contract with Paramount as a producer/director after an eventful year with David O. Selznick resulted in two memorable Technicolor films: *A Star is Born* and *Nothing Sacred*. Wellman first came to prominence at Paramount a decade earlier when, partly due to his aviation experience in World War I, he was selected to direct the studio's epic film *Wings* (1927). He left Paramount in mid-1930 to embark upon an incredibly prolific 2 ½-year period at Warner Bros., which resulted in classics like *The Public Enemy* (1931) and *Wild Boys of the Road* (1933).

Wellman's first film as a director/producer for Paramount was the expensive Technicolor aviation epic *Men with Wings*. When it fared poorly at the box office, Paramount head William LeBaron asked Wellman to consider directing *Beau Geste*. Wellman, however, already had a new version of Rudyard Kipling's *The Light That Failed* on deck. LeBaron then suggested that *The Light That Failed* might fare better as a followup to *Beau Geste*.

In December of 1938, the cast of *Beau Geste* included Gary Cooper in the leading role and Oscar Homolka as the evil Sergeant. When production began a month later, only Cooper remained. The cast now featured Ray Milland and Robert Preston as John and Digby Geste, Heather Thatcher as Lady Brandon, Susan Hayward as Isobel Rivers, J. Carrol Naish as the weaselish Rasinoff, and Brian Donlevy as the terrible Sgt. Markoff.

Curiously, while Paramount had long planned to present *Beau Geste* in Technicolor, an 11th-hour decision resulted in directors of photography Theodor Sparkuhl, ASC and Archie Stout, ASC shooting the picture in black-and-white. This sudden decision seemed to stem more from the studio's desire to replicate Brenon's 1926 version as closely as possible than from any budgetary concerns.

Production began on January 16, 1939. Barrack interiors were built on Paramount stages 6 and 13, where Milland, Naish and Crawford filmed scenes during the first four days of shooting. The following Monday, the unit relocated to the Paramount Ranch to film some parade ground exteriors. Although Wellman was noted for his fast filming, the combination of a large cast and limited daylight caused him to fall behind schedule after only four days at the Ranch.

The remainder of the interior barracks scenes were filmed over the last week of January. Wellman never entirely caught up with the schedule. The company had to leave for the location in Arizona on February 4, so some of the interior scenes were scheduled for later.

As Herbert Brenon did 10 years earlier for his *Beau Geste*, Wellman and LeBaron had Fort Zinderneuf constructed atop the white dunes of Buttercup Valley. (A year earlier, Henry Hathaway had intended to shoot on the Somerton, Arizona, location of Selznick's 1936 film *Garden of Allah*. Ironically, as Wellman began filming, all of the structures for Hathaway's version were still standing: a fort; wardrobe rooms; an oasis with date trees; a barn with stalls for 20 horses, and a corral with room for 500 horses.) A tent city — branded "Camp Wellman" — was quickly erected at a cost of $50,000, and could only be reached via a single-lane plank road built over a mile-and-a-quarter stretch of desert. The only source of communication between the camp and the studio was nine miles away in Sidewinder, California, at an abandoned gas station converted into a teletype post.

Wellman and co. prepare to film* Beau Geste*'s first military sequence. In the right foreground, with his back to the camera and a newspaper under his arm, is Colonel Robert Gerard, fourth ranking officer of the French Foreign Legion and commander of its crack 2nd Regiment. The Paris War Ministry detached Gerard from active service in Morocco so he could act as Wellman's technical adviser.

Camp Wellman consisted of 126 tents that housed about 1,000 men, and boasted a post office, a movie theater, a recreation tent and other modern conveniences. The production also had 38 wranglers on hand to work with 125 Legion horses, 50 Arab horses, eight cast horses, 20 crew horses, and 20 pack mules. Six additional handlers oversaw the film's 15 camels.

Wellman's company toiled in Buttercup Valley (renamed "Beau Geste Valley" by the Yuma Chamber of Commerce for the duration of filming) for 22 days. Pilot Howard Batt conducted daily flights between Yuma and Clover Field, shuttling personnel, raw stock and exposed film. To lend an air of realism, 1,200 authentic Foreign Legion Lebel rifles were used in the picture.

Though Wellman was directing at his customarily brisk pace of 40 to 45 setups per day, the production repeatedly lost shooting days due to excessive wind, clouds, or sandstorms. LeBaron cabled Wellman on February 17: "...am really delighted with entire feel of picture — the wind can't last forever!" Wellman cabled Paramount executive Fred Leahy, "Hope you pick one of the few good days [to visit the location]. Would hate to tell the odd places sand gets in — rather satisfying at that, the scratching."

Logistical problems were often created by the desert winds, which frequently rendered sound recordings inaudible. To combat this, the sound man had to constantly reposition himself until the proper levels were attained. On one occasion, windstorms decimated a sand dune prominently featured in several prior shots, and tractors had to be brought in to re-create it. "This was a very rough location," said Youngerman. "One night we got blown out of our suppers; a sand storm came up. There was sand in everything, in all the food. It was rough." More than 20 men were hospitalized for heat exhaustion during the course of the production.

The intense heat, hard work and isolation took its toll on cast and crew. Wellman looked for methods of relaxing everyone. Recreation at Camp Wellman consisted of sports, cards, music and lots of new movies. On one occasion, Wellman took everyone across the border into Mexico for a weekend of music, dancing, and bullfights. Likewise, on February 28, the whole company got together to wish Wellman a happy birthday with gifts of a horse and an intricately tooled saddle. There was also a bus that regularly stopped in Yuma to visit a house of ill-repute until, according to Wellman, "a crazy little stuntman went berserk and burned [it] to the ground. A shame, so many rich memories destroyed by one oversexed idiot who had suddenly become impotent and blamed it on the brothel."

According to several members of the company, the biggest problem on the location was actor Brian Donlevy. Joe Youngerman said that Donlevy "messed around somewhat" and was "kind of a pain," often claiming not to have received his script pages for the next scene to be shot. Wellman put it more tersely: "Nobody liked the son of a bitch." During a climactic scene in which John Geste was supposed to stab Markoff with a bayonet, Ray Milland allegedly made sure to actually cut Donlevy, who reportedly fainted at the sight of his own blood.

Despite Wellman's own disdain for Donlevy, he realized that the actor was giving a prime performance. In fact, much of the film's impact lies in Donlevy's tour-de-force portrayal of Markoff. He is a Captain Bligh of the desert, who drives his men mercilessly, branding them "scum" and "stupid blundering pigs" as their mutiny is thwarted. Made up with a jagged scar across his cheek, Donlevy repeatedly scowls "I promise you!" and lives up to his word, making life hell for his Legionnaires. His sadism is demonstrated early in the film when deserters are brought back from the barren dustbowl, crazed and delirious from sunstroke and dehydration. As punishment, Markoff sends them back out into the desert. In battle, as his men fall under the rain of Touareg bullets, he props up the corpses in the ramparts ("Everybody does his duty at Zinderneuf, dead or alive!") and places rifles in their posts. In a touch of black humor, he says to a corpse, "The rest of the bullets you stop won't hurt as much as that one!" Donlevy was nominated for an Academy Award for the part and subsequently enjoyed a rather a fruitful career.

In both the Wren novel and the 1926 silent version, the sadistic sergeant was a Frenchman — Lejaune — while his hyena-like henchman, Boldini, was Italian. In the spring of 1939, however, the Soviet Union signed a non-agression pact with Nazi Germany, and *Beau Geste*'s villains were soon transformed into Russians. Despite the change, the picture was still banned in the predominantly French-speaking Canadian province of Quebec.

Rasinoff (formerly Boldini) was played by J. Carroll Naish, the versatile character actor who performed in hundreds of films from 1926 to 1971, including *The Hatchet Man* (1932), *The Robin Hood of El Dorado* (1936) and *Across the Wide Missouri* (1951). Naish's high, panicked voice makes Rasinoff as pitiable as he

Donald O'Connor (kneeling) and little Martin Spellman prepare to launch one of their model frigates. Presiding over the setup is assistant director Joseph Youngerman (center, in white shirt).

is despicable. In his memorable death scene, Rasinoff is shot off his perch from a lookout tower while tittering an absurd laugh. He plummets 50 feet, laughing all the way to his demise. This stunt was filmed by Richard Talmadge after Wellman and the first unit crew had returned to Hollywood on March 3.

Shots of stately Brandon Abbas, the Geste brothers' ancestral home, were filmed at Pasadena's Busch Gardens in the same ornate house and beautiful grounds Wellman utilized for the Stateside scenery in *Wings*. For the California footage, Wellman solicited cinematographer Theodor Sparkuhl, a frequent collaborator of Ernst Lubitsch. Sparkuhl came to Hollywood in 1933 and signed on with Paramount, eventually filming *The Big Broadcast of 1937* (1936), *Wake Island* (1942), *Star Spangled Rhythm* (1943) and many others.

The location cinematographer was veteran cameraman Archie Stout, who had worked with Wellman as early as 1930 (on both *Dangerous Paradise* and *Young Eagles*) and would later work with him on *Island in the Sky* (1953) and *The High and the Mighty* (1954). Stout stayed behind in Buttercup Valley to work with Talmadge's second unit. Wellman cabled Talmadge on March 14, "Tell Stout the photography — thank God — is brilliant!" But Sparkuhl was not so impressed. Stout's cables to Sparkuhl were invariably answered by camera department head Roy Hunter. Reading between the lines, one can detect a tinge of animosity — at least condescension — towards Stout from Sparkuhl.

Talmadge and Stout can be credited with capturing some of *Beau Geste's* most striking sequences, even though they worked from Wellman's explicit instructions: "Make slow truck shot shooting up close angle along any wall but front wall, day, as seen by Beaujolais. Be very careful about movement of camera." Or, for the attack on the oasis, "kill three [Arabs] at a time to show expert marksmanship of John, Hank and Buddy."

On March 17, Wellman formed a third unit (directed by Joe Youngerman and photographed by Lothrop Worth, ASC) to film transparencies on Paramount's New York Street. Wellman was now zipping through the Brandon Abbas sequences, with only occasional delays. (On March 20, for instance, he reported a half-day lost because of "slow progress requiring one of principals [Donald O'Connor] to get into suit of armor.") Talmadge finished up in Yuma on March 22, four days behind schedule, as he and a skeleton crew shot the burning of Fort Zinderneuf. Wellman's last day of production, April 5, was spent filming an exterior scene with James Burke and Francis McDonald that would be trimmed from the final cut.

Paramount ran extremely favorable previews of the picture on June 25, 1939 at the Fox Theater in Pomona, and on July 1 at the West Coast Theater in Long Beach. A few additional scenes were shot in June, and *Beau Geste* was released on September 15, 1939.

The film opens with a brilliant sequence, as a relief column approaches Fort Zinderneuf, an isolated post in the remote stretches of the southern Sahara. The scene's suspense is heightened by Alfred Newman's ominous score, as the reinforcements find the corpses of dead Legionnaires propped up at the fort's embrasures. The camera slowly tracks past their lifeless faces for chilling effect. The film flashes back to scenes of the Geste brothers as children at Brandon Abbas in England. Their unswerving dedication to one another is established through a scene of the young brothers playing with toy cannons; both swear that if one of them dies, the other will give the deceased a Viking funeral — wrapped in a flag on a flaming bier with a dog at his feet. The story then jumps ahead some 15 years when the Gestes are reunited in the Legion. Wellman blends Paramount gloss with Warners realism; with authentic sets, costumes and Lebelk rifles, he effectively captured the feel of the Foreign Legion during the time of French domination in North Africa.

From left: Isobel (Susan Hayward), Augustus Brandon (G.P. Huntley Jr.), John Geste (Ray Milland), Digby Geste (Robert Preston) and Michael "Beau" Geste (Gary Cooper) cut fine figures in their evening attire.

The highlight of *Beau Geste* is the siege of Fort Zinderneuf (which cost $250,000 to produce) and the attack of Arab Touaregs. A close-up of thundering horses pans up to a majestic view of onrushing hordes surging across the desert sands. Four attacks are hurled against the fort before the Arabs turn away, leaving only Markoff, John Geste, and the mortally wounded Beau alive. When Markoff searches Beau's person for a missing jewel, the enraged John stabs the Sergeant to death with his bayonet. In a touching moment, John kisses the dying Beau good-bye, and leaves the fort as the relief column approaches. The narrative is now neatly brought full-circle. Digby Geste gives Beau the Viking funeral he had requested as a child, wrapping him in kerosene-soaked barracks mattresses and playing a muffled "Taps." He lays the "dog" — Markoff — at Beau's feet and sets them both ablaze.

Paramount hoped to emphasize the great strides in motion picture technique over the past decade, and opened its press screenings by running reel one of Brenon's silent *Beau Geste*. The plan nearly backfired; most of the critics considered the 1926 film to be the definitive version and went gunning for Wellman's adaptation. Audiences, however, enthusiastically approved the sound remake. In fact, its popu-

larity is the reason why, in December of 1939, David O. Selznick chose a showing of *Beau Geste* as the perfect place to preview his new film *Gone with the Wind* — he knew that *Beau Geste* would guarantee him a full house.

In 1950, *Beau Geste* was re-released on a double bill with Hathaway's *Lives of a Bengal Lancer* (1935) starring Gary Cooper and Franchot Tone. Some six minutes were cut from the film, including scenes in a Port Said bar where John Geste meets the Americans Hank and Buddy, and scenes in which the Legionnaires pour boiling oil on the attacking Arabs. These excised scenes seem to have disappeared completely from existence.

Even decades of spoofs, remakes and rip-offs can't dim the vigorous appeal of *Beau Geste*. Wellman's work is epic filmmaking at its best, marked by sweeping action, fine performances, crisp photography, and a stirring Alfred Newman score. Though the film is basically a storybook adventure steeped in Victorian romanticism, a vanished code of honor, and brotherly love, the narrative remains as exciting and involving as ever. ◆

Credits

A Paramount *picture. A* William A. Wellman *production. Executive Producer:* William LeBaron. *Produced and Directed by* William A. Wellman. *Screenplay:* Robert Carson (*and uncredited,* Grover Jones, W.P. Lipscomb, Bertram Millhauser, William A. Wellman). *Based on the 1924 novel by* Percival Christopher Wren. *Directors of Photography:* Theodor Sparkuhl, ASC *and* Archie J. Stout, ASC; *Second Cameraman:* Guy Bennett. *Camera Operators:* Bill Rand, James Knott. *Assistant Cameraman:* Lothrop Worth, George Trafton. *Additional Cameramen:* Art Lane, Cable, Grant. *Stills:* Otto Dyar. *Script Clerk:* Herb Coleman. *Editor:* Thomas Scott. *Art Direction:* Hans Dreier, Robert Odell. *Set Decorator:* A.E. Freudeman. *Assistant Director:* Joseph Youngerman. *Second Assistant Directors:* Eddie Salven, Clem Jones. *Unit Manager:* Sidney Street. *Assistant Unit Managers:* Bill Wallace, Frank Kies, Stanley Goldsmith. *Technical Advisors:* Louis Van Der Ecker, Colonel H. Gerard, French Foreign Legion. *Drillmaster:* Carl Voss. *Sound* (Western Electric): Hugo Grenzbach, Walter Oberst. *Location Mixer:* Howard Fogette. *Assistant Editor:* Thomas Neff. *Sound Editor:* Reeve. *Costumes:* Edith Head. *Wardrobe:* Leonora Sabine, Pat Williams, Sam Levine. *Makeup:* Wally Westmore, Bud Westmore, Al McQuarrie, Max Asher. *Musical Score:* Alfred Newman. *Additional Score:* Richard Hageman. *Music Conductor:* Irvin Talbot. *Orchestrations:* Edward B. Powell, Leo Shuken, John Liepold, Lucien Calliet, Herman Hand. *Music Adviser:* Troy Sanders, Steve Pasteracki. *Location Manager:* Fred Harris. *Location Operations:* William Wallace. *Set Decorations:* A. E. Freudeman, Bertram Granger. *Props:* Bob McCrellis, Joe Keller, Jack De Golconda. *Grip:* William Austin, George Sherman, A. Bricker, W. F. Jones. *Electricians:* Carl Gotham, Earl Cantrell, Amos Godell, C. H. Erben. *Wranglers:* Leo Archibald, Chuck Jennings, John McErwin, Leland Sanford, Jack Saunders, Allen Lee. *Stand-Ins:* Slim Talbot (Cooper), Herb Naish, Frank Henry, Henry Kraft, Ray Finney. *Horsemen:* Enos Overett, John Eckert. *Camel Supervisor:* Carl Stoecker. *Camel Trainers:* Edward Benchley, Raymond Cihler. *Publicity:* Don King. *Assistant to William Wellman:* Zoila Conan. *Second Unit: Director:* Richard Talmadge. *Cinematographer:* Archie Stout. *Assistant Directors:* Harry Scott, Harry Caplan. *Script Clerk:* Gene Bush. *Third Unit: Director:* Joseph Youngerman. *Cinematographer:* Lothrop Worth, ASC. *Assistant Director:* Harry Caplan. *Special Effects: Director:* Gordon Jennings, ASC; *Process Cinematographers:* Farciot Edouart, ASC, Dewey Wrigley, ASC.

Running time: 120 minutes. Released September 15, 1939.

Michael "Beau" Geste, Gary Cooper; *John Geste,* Ray Milland; *Digby Geste,* Robert Preston; *Sergeant Markoff,* Brian Donlevy; *Isobel Rivers,* Susan Hayward; *Rasinoff,* J. Carroll Naish; *Schwartz,* Albert Dekker; *Hank Miller,* Broderick Crawford; *Buddy McGonigle,* Charles T. Barton; *Major Henri de Beaujolais,* James Stephenson; *Lady Patricia Brandon,* Heather Thatcher; *Augustus Brandon,* G.P. Huntley Jr.; *Lt. Dufour,* James Burke; *Renault, a deserter,* Arthur Aylesworth; *Renour, another deserter,* Henry Brandon; *Renoir,* Harry Woods; *Vousin,* Harold Huber; *Beau as a child,* Donald O'Connor; *John as a child,* Billy Cook; *Digby as a child,* Martin Spellman; *Isobel as a child,* Ann Gillis; *Augustus as a child,* Augustus Holt; *Lt. Martin,* Harvey Stephens; *Maris,* Stanley Andrews; *Krenke,* Barry McCollom; *Bugler,* Ronnie Rondell; *Burdon, the butler,* Frank Dawson; *Cordier,* George Chandler; *Glock,* Duke Green; *Colonel in recruiting office,* Thomas Jackson; *Sergeant-Major,* Jerome Storm; *Sergeant,* Joseph Whitehead; *Corporal,* Harry Worth; *Corporal Golas,* Nestor Paiva; *Arab scouts,* George Regas, Francis McDonald; *Legionnaire S. Roberts,* Carl Voss; *Legionnaire J. Williams,* Joe Bernard; *Legionnaire L. Paul,* Bob Perry; *Legionnaire N. Fenton,* Larry Lawson; *Legionnaire T. Clements,* Henry Sylvester; *Legionnaire A. Virginia,* Joseph William Cody; *Trumpeter O. Leo,* Joe Colling; *Girl in Port Said Cafe,* Gladys Jean; *Legionnaires,* Bob Kortman, Gino Corrado, Henry Lucenay, Nick Vehr, Alexis Davidoff, Bert Stevens [Barbara Stanwyck's brother], Otto Steiger, Charles Townsend and Tex Driscoll; *Stuntman for Naish,* Otto Mezetti; *Donlevy's stand-in,* Frank Henry; *Legionnaire Captain,* Thomas Jackson; *Sergeant-Major,* J. Storan; *Buron, the butler,* L. Herry; *Butler,* J. Colling; *East Indian,* George Regas.

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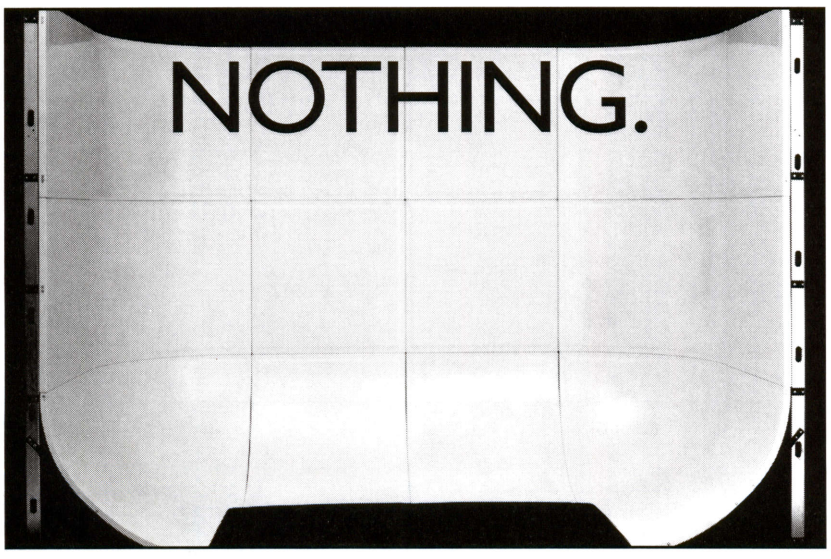

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Cutty Sark Snares Narita for "Wolves"

by Mary Hardesty

Liquor producer Cutty Sark wanted its latest international campaign, "Wolves," to convey a strong message, and thus approached director Greg Gold and award-winning cinematographer Hiro Narita, ASC (*Never Cry Wolf* and *White Fang II)* to bring a commercial about the animals to vivid life.

The spot focuses on a free-spirited man who describes his wilderness adventure to visiting house guests as they each enjoy a tumbler of Cutty Sark. These exploits are illustrated by Narita's dramatic footage of the man hiking through a moonlit forest and encountering a wolf snared in a trap. After using his gun to blast the trap and set the animal free, the man returns to his cabin as the wolf races off to join his pack.

Because the storyboards outlined intricately choreographed animal action, hybrid dog/wolves were featured in the spot, since pure-bred wolves cannot be trained. Notes Narita, "Some wolves look very much like Malamutes, except that wolves have longer legs and snouts. We took the strong Malamute traits out of the animals' faces by painting certain lines on them. From a distance, you really can't tell that they have makeup on. Fortunately, all the scenes take place at night, so it wasn't too critical that the 'wolves' look perfect."

The agency was persuaded that shooting day-for-night in Canada would be the most economical approach. "Lighting a large forest area at night creates so many difficulties, and it wouldn't look very realistic," says Narita. "You really can't shoot in full, natural moonlight, so we ended up doing day-for-night. We shot in backlight as much as possible, and quite a bit if the shots were in shady areas. If there was direct sunlight, it always had to be ¾ backlight or full backlight.

"Normally, when shooting day-for-night, you underexpose to get a bit of contrast, and highlight by adding lights. But I didn't want to underexpose too much, because that would have given the post team less control.

Narita shot the commercial with uncorrected Kodak Vision 500 film. The tungsten stock's cold blue tones were further enhanced in the transfer and in post; dramatic backdrops, evening skies and a moon were added to the scenery via CGI. "You might think that the 500 would be too fast, but I wanted to stay with one stock during the entire shoot, because we were working outdoors in the cold with a crew I had never used before," explains Narita. He adds that he often relied on ND12 filters during the brighter parts of the day.

Narita points out that loading magazines in cold weather can also be problematic. "We brought six magazines and a battery-operated heater barney to keep them and motor above freezing," says Narita. "In very extreme weather, even the battery in the box has to be protected with additional insulation."

The cinematographer was thankful that the shoot didn't require any extended takes. "When we shot *Never Cry Wolf*, we were shooting even farther north, where the magic hour was between 8 p.m. and 6 a.m., but there was no magic hour in Montreal when we shot. In fact, daytime was very short and we had to hustle. Fortunately, we had fairly consistent weather, and when it did snow, we were able to shoot the sequence of the man walking just the way it was in the storyboard."

The shoot's second day focused on the wolves; the storyboards called for the animals to go from point A to point B, and then for the Cutty Sark adventurer to run after them in a wide shot. The wolves, however, refused to run to the designated spot. "Wild animals are trained to do specific actions, and when you get to the set and things don't work out, you have to be prepared

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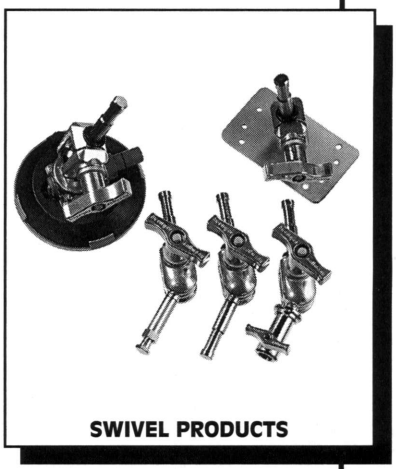

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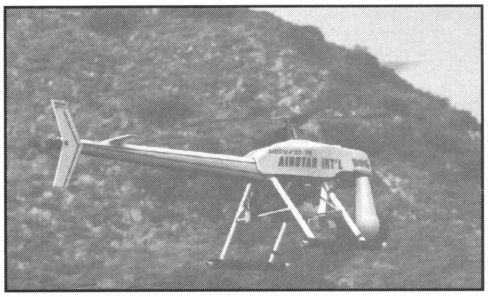

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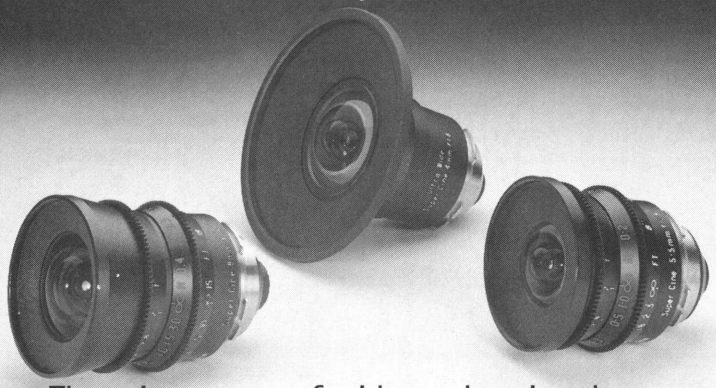

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to improvise," Narita says. "The funniest thing about this shoot was the use of reference marks to help the post guys add the digital moon. The standard practice is to use bright tennis balls, so we put four orange balls on posts 20 yards apart. The trainer became quite upset when he saw them, because the wolves were distracted and ran toward them instead of where they were supposed to go. That's the kind of thing that seems so obvious in retrospect, but slip-ups do happen. We ended up foregoing the reference points, putting another animal trainer on point B, and digitally removing her later."

A wolf had been specially trained to hang from a rope that resembled a snare, but the client decided that it appeared a bit cruel, so the shot was altered to show just the animal's back foot caught in the trap. To avoid distracting the wolves, Narita shot primarily through a 300-600mm lens on an Arriflex 35-3 camera obtained from Montreal-based Location Rentals. An additional high-speed camera was used to shoot the gun scene. "The special effects guy designed a rope that would explode on cue to create the illusion of the bullet breaking it, and we shot it at 40, 60 and 90fps," notes Narita.

The third day was spent shooting the interior of a nearby cabin, which also served as production's base camp. "The client asked us to add six or so product shots. I had anticipated that, so the gaffer, Jacques Fortier, had brought along all of the mirrors, small nets and flags that you need when shooting tricky bottle lighting," Narita recalls.

When asked to provide pointers on filming wild animals, Narita has three recommendations. "Tell the trainer the specific actions you want and allow a minimum of two weeks to teach the animals. Make sure the animals are taken to location several days early so it isn't a total surprise for them. You may also have to allow time for the animals to get used to the crew and equipment." ◆

Title: "Wolves"
Client: Cutty Sark
Cinematographer: Hiro Narita, ASC
Director: Greg Gold
Production Company: Stefi S.A./Athens
Production Service Company: Milk & Honey Films/Montreal
Advertising Agency: Saatchi/Saatchi/Athens

compiled by Lisa Sibert and Andrew Thompson

New Arri Controller

Arriflex has released version 1.3.0 of its Laptop Camera Controller (LCC). The new version provides support for all their new-generation Arri cameras: the 435, 535, 535B and 16SR3.

The LCC is the first software available for two-way communications between state-of-the-art motion picture cameras and contemporary computers. It controls all camera functions, maintains a database of camera status information and is capable of printing automated camera reports. The LCC operates on any System 7.1 or later Macintosh Powerbook. Functions such as creating speed/shutter ramps and entering information in camera reports have been made easier.

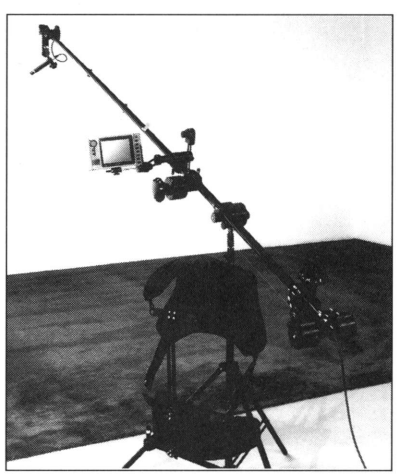
The LCC package consists of software, Mac-to-camera connecting cables, and a user's guide.

Arriflex Corporation, (914) 353-1400, (818) 841-7070, Fax (914) 425-1250, (818) 848-4028.

Portable Video Jib

LightWave Systems presents the Fly-Cam, a lightweight, portable jib that can fly and float miniature video cameras weighing up to ½ lb. This system allows precision angles that are impossible to achieve from a tripod. The Fly-Cam's adjustable-length boom arm (extending from 5 to 15 feet) can be worn on a body vest for added mobility, and also adapts to any standard tripod or ⅝" C-stand spud. The unit's net weight is 11 pounds, while the complete system (including body vest, counterweights, and carrying case) is 45 pounds.

The Fly-Cam system comes with a four-section aluminum boom arm and fittings, two drive/control mechanisms, an adjustable support mast and body harness arrangement, four boom arm counterweights, and a C-stand support adapter. These items fit into a custom-molded high-impact ABS case with heavy-duty frames and latches. The boom arm tubes consist of highly polished, black anodized, 2024 aluminum alloy. Molded components are hand-cast



urethane, epoxy and carbon/resin matrix, utilizing cast-in-place brass inserts. All fittings are stainless steel, anodized aluminum and brass.

The Fly-Cam provides for carriage on the body, where the boom hovers in front of the operator with simple, ergonomic controls. It configures with a continuously facing LCD or CRT monitor and offers two distinct setup modes applicable to preferred field or stage uses.

The Fly-Cam 2 version adds an horizon leveling control with a readily tiltable Dutch head capability. Extreme flexibility comes from the variable jib length and the ability to move anywhere quickly. Direct silicone drag (rather than servo controls) facilitates feathering moves.

Currently, a number of miniature video cameras available in both the NTSC and PAL formats can be used with each Fly-Cam model. Dampened pan-and-tilt controls via direct lines lend a tactile feel to the camera moves. The unit remains fully setup while in its case, with video camera and cabling in place.

Light Wave Systems, (818) 727-9900, Fax (818) 727-9930, Internet: lightwavesystems.com.

New Kodak Stock

Kodak has introduced two new members of its ever-growing family of Vision motion picture films with the addition of the 200T and 250D stocks.

Both new tabular-grain emultions are available in 65mm, 35mm and 16mm formats. The Vision 200T is optimized for an exposure index of 200 in 3200°K tungsten light; it can also be used in natural or artificial daylight with a color-correcting filter on the camera lens. This stock is designed for use as an alternative to the Eastman EXR 5293/7293 color film which will remain available in all formats.

The Vision 250D is optimized for an exposure index of 250 in natural and artificial daylight, and also with mixed sources of warm and cold light; it can also be used in tungsten light with a color-correcting filter on the lens. This stock will replace Eastman's decade-old 5297/7297.

The new stocks' imaging characteristics (including extended exposure latitude, dye stability, tonal scale and color rendition) are consistent with the Eastman EXR motion picture films—and are designed to be intecut seamlessly for both television and cinema applications.

As with the all other Vision stocks, the new 200T and 250D are manufactured in Building 38 at Kodak Park in Rochester, NY, which houses a highly automated film-manufacturing system equipped with advanced robotics and process-control technologies.

Contact your local Kodak representative for further details. ➢

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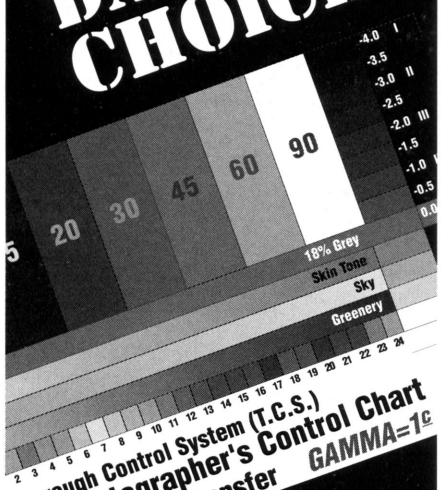

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Kodak Unveils New Cineon Systems

Eastman Kodak Company recently announced its new line of products for the Cineon system, including the Cineon Genesis Plus film scanner, enhanced Cineon effects (FX) and compositing software (version 3.5), and the new Lightning II laser film recorder.

The updated Cineon version 3.5FX system is now available on the latest generation of Silicon Graphics platforms, including Cineon Tornado for the Onyx2, Cineon Storm for the Octane, and Cineon Typhoon for the desktop O2 workstation. Additionally, Cineon software works with the Origin 200 and Origin 2000 servers for rendering. All Cineon systems run the same feature set, including Ultimatte, grain management and 3-D space.

Primatte S-100, a powerful chromakey and image-compositing application, is now available as an optional plug-in module with the 3.5 compositing software. The Polyhedral Slicing Algorithm, a process patented by developer P.E. Photron, is used to integrate the Primatte S-100 application into the Cineon GUI. The Primatte S-100 application also gives digital compositors a high- performance tool for color-spill removal. Other features include resolution-independent image manipulation, multiple layering, and 20 levels of undo/redo commands. Image data at 10-12-16 bits per RGB channel can be imported and exported, and a wide range of image formats is supported.

The new Genesis Plus film scanner accurately translates the full range of color and contrast in analog film images into digital image files. It features precise pin registration and full 10-bit color sampling, and is capable of up to 4K resolution.

The new Lightning II laser film recorder, which transfers digital picture files to motion picture film, is based on the same advanced hybrid imaging technology as the original Lightning recorder film. This second-generation recorder preserves all of the resolution and subtle details in colors and tonality on the original negative when it is used to transfer digital picture files to a high-quality 35mm color intermediate film using a high-intensity laser.

The Lightning II offers several new features, including a fiber network interface and queue manager for recording jobs from networked workstations and command line interface to production management systems. The new recorder is more than four times faster than CRT-based film recorders. It is designed to handle more than 50,000 frames per shift per year. It also can transfer 4K images to film in approximately 10 seconds per 35mm frame, and 2K images in approximately seven seconds per 35mm frame.

Both the original and second-generation Lightning recorders are designed for output onto Eastman EXR 5244, an ultra-fine-grain color intermediate film designed for the mastering of release prints.

Contact your local Eastman Kodak representative for further details.

Versatile VistaVision Camera

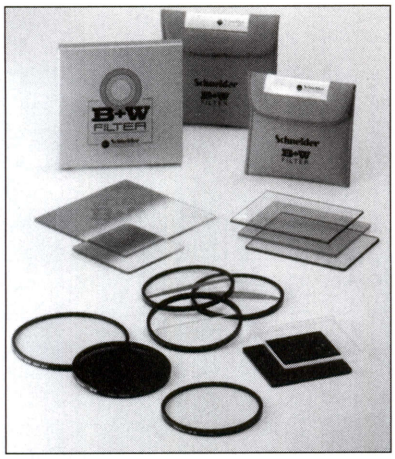
Oracle Communications Corp.'s optical division recently unveiled the Oracle Vista Optivision VistaVision camera, which features a non-obstructive rotary mirror for reflex viewing. Its movement was adopted from Mitchell's dual-pin registration, modified for transverse operation. Powered by a 24V DC battery pack, the camera is capable of shooting from 1 to 32fps in forward and reverse, offers a crystal-controlled sync motor, and equipped with a left-side digital counter measuring in either meters or feet. Also featured is a Nikon mount for use with high-speed Nikkor lenses, a 0 to 170-degree shutter control, a 20-degree orientable erect viewfinder, two 500' magazines (equipped with a torque motor drive), and a remote-control cable. The Optivision camera is also equipped with its own matte box, supported by two Arriflex-type iris rods, which can be modified to accept Arriflex matte boxes and accessories.

The camera is light and compact enough to be mounted on nearly any industry-standard tripod, and versatile enough for use in tight quarters and high-up places.

Oracle Communications Corp., (310) 556-FILM, Fax (310) 556-3468.

Clear Optical Glass Filters

Schneider Optics has engineered an improvement in motion picture image quality with a new line of B+W (Biermann and Weber) filters made from



crystal-clear, water-white glass. They are designed to increase creative control during production and reduce reliance upon postproduction correction of filter-related photographic flaws. The filters are diamond-cut from highly homogenous, optical-grade glass. Each is then precision-ground, polished and tested to ensure exact thickness, flatness and plane parallelism (the precise flatness and exact parallel relationship between front and back surfaces).

In addition to the filters' ability to produce a truer color while delivering edge-to-edge sharpness, they are designed to resist abundant wear and tear. The lens' Edge Seal eliminates delamination and edge chipping, while also reducing edge reflections and flare. Because of their consistent quality, using these new Schneider lens also eradicates the need to keep separate sets of filters isolated for A and B cameras; if one misplaces a Schneider filter mid-shoot, any other Schneider filter with the same model number will be able to duplicate the effect.

Schneider B +W filters are available in square, rectangular and round sizes in a full line of clear, color-correction and color effects, neutral density, warming, combinations, UV-absorbing, enhancing, softening, full-and-split diopters and TRUE-POL.

Schneider Optics, (516) 761-5000, Fax (516) 761-5090, Internet: schneideroptics.com.

Update on Lenses and Gyro-Stabilizing Unit

SpaceCam announces an expanded lens capability on all systems to include not only the 90-degree Century Precision Periscope lens system, but also

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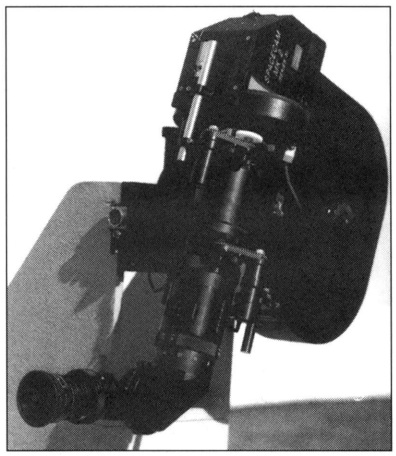


the Panavision/Frazier Lens system. Both of these optical systems enable ground-level lens heights to be obtained from camera cars. The Panavision/Frazier system also allows continuous 360-degree image rotation and greatly enhanced depth of field. The Frazier can also be used in airborne helicopter applications to provide ultra-wide-angle views with 360-degree rotation. This capability — when combined with the steadiness of the SpaceCam platform — enables duplication of high-speed jet-fighter POV's and other specialized visual effects.

SpaceCam also introduced the SpaceCam Series III gyro-stabilized camera system for aerial, crane, camera car, boat and cable applications, which features improved stability, control and reliability due to the integration of new platform electronics. This third generation of electronics incorporates full digital control and increased memory to allow for a full 1,000' motion recording. The system also offers provisions for wideview video camera permitting the operator to track and view an object before it enters the film camera's frame.

As with the previous two SpaceCam systems, Series III supports 35mm 4-perf, Super 35, 35mm 8-perf/VistaVision, 65mm 5-perf, and 65mm, 15-perf/Imax. (All camera platforms are available in-house except Imax.)

The system includes the latest version of the SpaceCam color fiber-optic taper viewfinding tap with the image now being displayed on both a high-resolution 800-line monochrome monitor and a 500-line color monitor.

SpaceCam Systems, Inc., (818) 889-6060, Fax (818) 889-6062.

New Full-Spectrum Fluorescent Lamp

The Kino Flo KF29 (2900°K) full-spectrum, high-output lamp has been engineered with a new blend of rare-earth phosphors to match the spectral sensitivity curves of both film and video capture equipment. Kino Flo previously offered the KF32 (3200°K) tungsten-balanced lamp, which earned the company an engineering award from the MPAA in 1995. The new KF29 design, however, refines the lamp engineering to display only 2900°K light, rather than the 3200° to 3500°K color temperature range of the earlier KF32. In addition, the new KF29 is the first high-output fluorescent lamp that will not shift in color rendering when it is overheated due to poor ventilation or high ambient temperatures.

The KF29 lamp comes in 15", 24" and 48" sizes. The lamps are designed to run in Kino Flo's location and studio lighting luminaries, or in standard architectural luminaries. Six- and eight-foot lamps will be available later in 1997.

Kino Flo, Inc., (818) 767-6528, Fax (818) 767-7517.

The Scanner

Egripment now offers the Scanner, a single, compact package of camera crane and remote pan-and-tilt head which can be operated either by one person (from the back of the crane arm) or by a combination of camera operator and grip. If required, the controls for the Scanner's remote head can be removed from the crane and operated independently of the arm.

The Scanner crane is a lightweight telescoping crane arm. The unique telescoping feature allows the crane to be used at exactly the length required. To extend the arm, simply slide the front section out and lock-off. There is no need to remove the head, fit an extension section to the crane, add extra parallel bars, replace the remote head or add extra counterweights. Balancing the Scanner's crane arm is as simple as extending the front section; wind out the back section of the crane until the arm is perfectly balanced and then lock off.

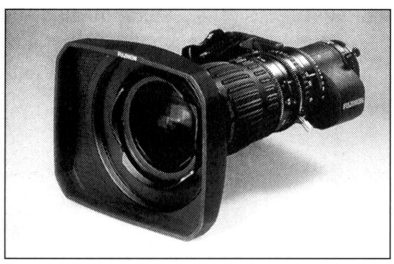
The base of the Scanner's crane combines maneuverability, strength and lightweight construction. The tiny footprint allows the crane to be positioned in the smallest of places. The Scanner easily fits onto track by sliding

on the Egripment Track Wheels. No special tracking base is needed.

For ease of wrapping the Scanner at the end of a shoot, the crane arm folds into itself and forms only one section to be transported. The crane fits neatly into its own base and can be wheeled as one complete unit to and from a location.

The pistol grip controls of the Scanner remote head give the operator positive and precise control of the pan, tilt, zoom and focus. Between these controls is the electronic control unit of the head, from which the operator can easily control and adjust all of the functions of the head. These functions include: speed adjustments for pan, tilt and zoom; reversing switches for pan, tilt, zoom and focus, to suit the operator; adjustable electronic dampening system (EDS) to ensure a smooth start and stop; master on/off control; three full adjustable preset focus positions; VCR on/off; and a choice of six different positions for the operator's monitor.

Egripment USA Inc., (818) 787-4295, Fax (818) 787-6195.



New Fujinon Wide Power Lens Available

Plus 8 Video has become the first rental house in the United States to receive the new Fujinon A10x4.8 EVM/ERD Wide Power lens. Part of Fujinon's AT series of lenses, it features a wide angle of view (an 85-inch horizontal angle) and optimum optical performance. Aspheric technology and Fujinon's patented electron beam coating enhance the lens' overall performance. The internal focusing system eliminates pumping effects and provides the operator with constant picture size during focusing.

A built-in 2X extender increases the focal length of the lens up to 96mm. Zoom speed, from wide to telephoto positions, can be varied from five seconds to one second. The quick zoom switch initiates fast zoom to the telephoto position; the operator then returns

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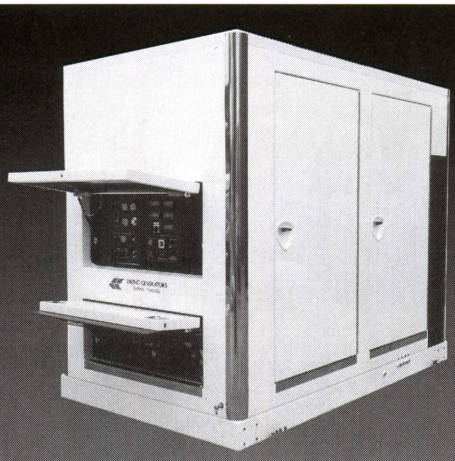

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New Colors for Background Line

Westcott has added three new colors to its Masterpiece line of muslin sheet backgrounds. The new, hand-painted (with latex-based dyes) muslin background colors are Athens, Helsinki Cloudscape, and Canberra.

The Athens background is a dark, rich blue-gray color. The Helsinki Cloudscape background is reminiscent of a blue sky with clouds of white and light gray, and the Canberra background is a dark charcoal with subtle shadings of deep gray.

Westcott's complete line of lightweight and portable backgrounds are available in 10' x 12' and 10' x 24' sheet sizes.

Westcott, (419) 243-7311.

Three-Way Splitter

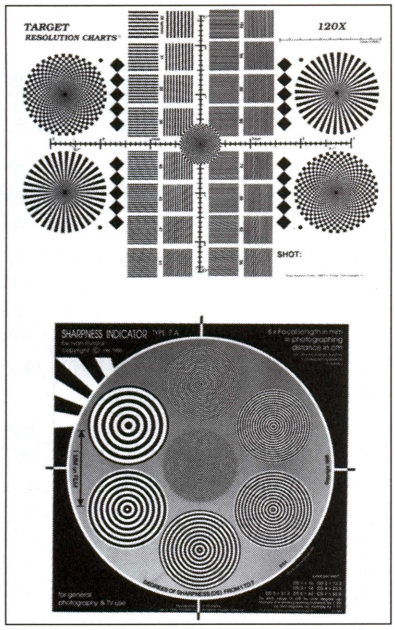
LentEquip Film and Video introduces its new 11-pin Arriflex/Fischer three-way splitter, which address the need for additional accessory connections on Arri cameras. The splitter itself features an integrated LED to advise the operator that power is present to the splitter box. All 11 connections are present at each of the external connectors, allowing camera assistants to use a light, remote on-off and a speed control unit at the same time without connector limitations. The splitter is a fully-shielded unit, and the enclosure is made of anodized aluminum to withstand harsh handling. The total weight of the splitter assembly is 184 grams (6.5 ounces). This unit is also available in 3- and 4-pin XLR configurations.

LentEquip Film and Video, (416) 406-2442, Fax (416) 461-1082.

Two New Lens and Camera Resolution Charts

Alan Gordon Enterprises, Inc., has two new lens and camera resolution charts for shop and location use: the Sharpness Indicator and the Target.

The Sharpness Indicator is a



single chart for setting critical focus at any distance with multiple patterns; it measures 9-½" x 9-½". The unique pattern design eliminates focusing errors; when looking at the ground-glass image there will be no question when perfect focus has been achieved. Cameramen and assistants can quickly and easily evaluate sharpness and resolution of all types of motion picture, video and still cameras. With this chart you can easily check the resolution of any lens/camera system, set or check back focus and compare resolution between various film and video formats.

The Target chart kit includes eight charts: two measuring 17-½" x 13-½", one that is 13-½" x 8-½", and five 5-¾" x 7-¾"in size. This convenient and accurate system determines photographic resolution with no measuring, no formulas and no tables. The chart kit allows for checking lens and camera resolution, critical eye focus, depth of field, comer distortion analysis, contrast analysis, and zoom-in eye focus.

Alan Gordon Enterprises, (213) 466-3561, Fax (213) 871-2193, Internet A-G-E.com.

Multi-Platform 3-D Modeler

Electric Image, Inc. introduces the ElectricImage 3-D Modeler, which offers a solid modeling/NURBS surface hybrid with the power to create anything from spaceships and cars to creatures and aliens. The 3-D Modeler combines

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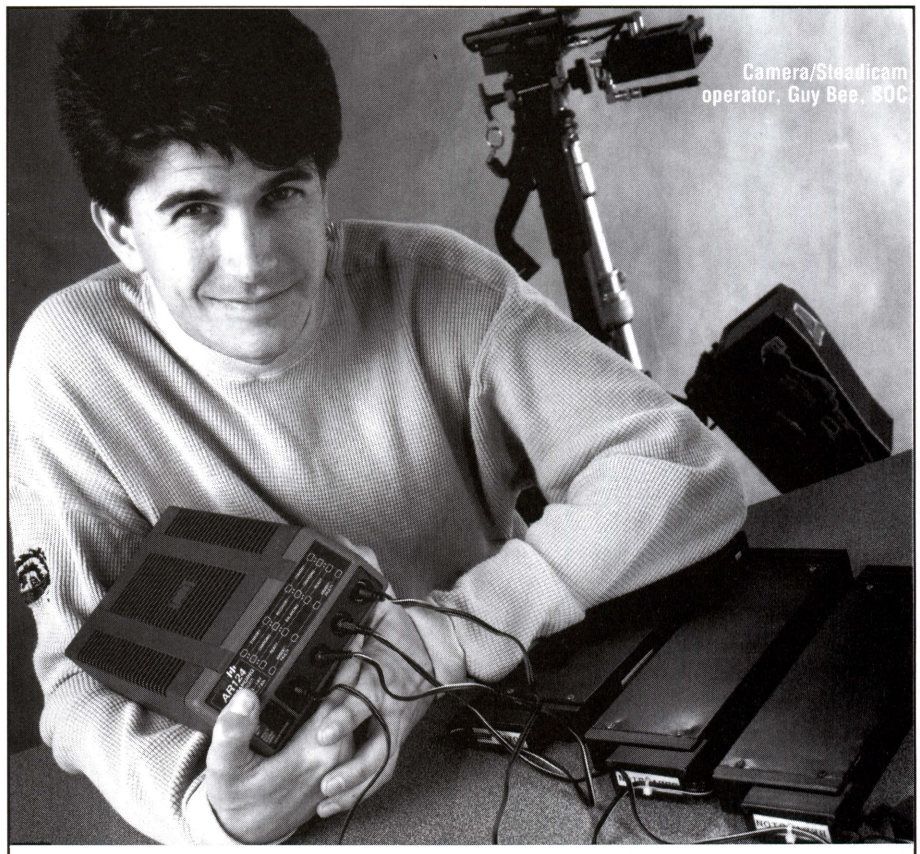

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Frankly, Guy takes the AR124's features for granted. Like the ACS™ Advanced Charging System which extends the duty cycle of his batteries far beyond that achievable with other systems. Or the Autoranging™ facility which automatically adapts the charge program for a variety of cell types, voltages & capacities. Thanks to the latest *switch-mode* technology, Guy's AR124 runs off AC power anywhere in the world without a thought.

Actually Guy doesn't often think about the AR124 or the cells he's safely charging. That's the way he likes it. He'd rather think about his next shot.

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materials and texture controls, which can be rendered with the included ElectricImage Still Camera image rendering engine at resolutions up to 32K by 32K.

While most 3-D modeling products are created for the architect or the engineer, this new multi-platform program was designed for 3-D animators of all kinds. The intuitive interface, extensive tool set, materials editor, still image rendering engine, and NURBS technology will be sure to accommodate demanding projects. Electric Image chose to build 3-D Modeler upon the ACIS Geometry Engine from Spatial Technology Inc. (AMEX:STY), the industry-standard solid modeling engine. Electric Image then extended ACIS by adding an array of surfacing tools, and making the distinction between the tools transparent to the user by building a fast, intuitive and platform independent user environment.

The 3-D Modeler will be integrated into ElectricImage System and ElectricImage Broadcast in the next major version release. The program will also be available separately as a stand-alone product and make its debut on the Macintosh platform; NT, Alpha NT and SGI versions are also in development.

Electric Image (818) 577-1627, (888) RENDER-1, Fax (818) 577-2426, Internet: electricimage.com.

Riot System to Support Film Recorder

Discreet Logic and Management Graphics announced at NAB '97 that Discreet Logic's new Riot system will support Management Graphics' Solitaire Cine digital film recorder.

Riot is a new resolution-independent, advanced-image management toolbox specifically designed to be the cornerstone of a digital film production facility. The system manages and controls film image scanning and performs processing on images (such as regrain or degrain) for element preparation and final image adjustments. It also manages and controls digital images to film recording, and has the ability to run all processing functionality in batch mode. It supports the WIRE high-speed networking utility and provides calibration for scanners, film recorders and monitors, fully integrating Discreet Logic applications within a facility. Riot works with images in any resolution on the same desktop, maintaining accurate color

depth and image integrity through the production chain, form acquisition to output and monitoring.

The Cine III custom-designed CRT uses a special small spot to ensure sharpness. Its unique face plate and lenses add an extra-wide dynamic range for optimum contrast. Imaging speed is as fast as 18 seconds per frame at 2K or 4K resolution. Crucial parameters such as alignment, vignette, linearity, orthogonality, format, dynamic focus and size are all precisely managed by MGI's Digital Geometry Control.

Discreet Logic, (514) 948-7127, Fax (514) 272-0585, Internet: discreet.com; Management Graphics, Inc., (612) 854-1220, Fax (612) 851-6159, Internet: mgi.com.

Rendering Engine for Adobe After Effects

Integrated Computing Engines, Inc. (ICE), maker of hardware and software engines for super-fast visual computing, announced the availability of version 3.0 of the company's flagship ICEfx rendering engine. Enhanced with greater workflow support and additional special effects, ICEfx 3.0 allows up to 20-times faster rendering of special effects by utilizing the GreenICE PCI board with 16 processors running concurrently.

Enhancements in ICEfx 3.0 expand the range of special effects that are optimized to run many times faster on ICEfx systems — and allows the sharing of "ICEd" files across workgroups. ICEfx 3.0 also includes the hardware-independent versions of the ICEfx software, enabling projects to be shared between systems running with and without the 16 processor GreenICE board. Workgroups can send projects to a centralized ICE'd system for final renders.

ICEfx 3.0 is available for the Adobe After Effects software application on Mac OS; an NT version will be released to coincide with Adobe's availability of After Effects for NT.

Integrated Computing Engines, Inc., (888) ICE-THIS, Fax (617) 768-2301, Internet: iced.com.

3-D Animation Environment

Side Effects Software announced at NAB'97 that it is currently shipping Houdini 1.1, the new 3-D animation environment. This fully-integrated

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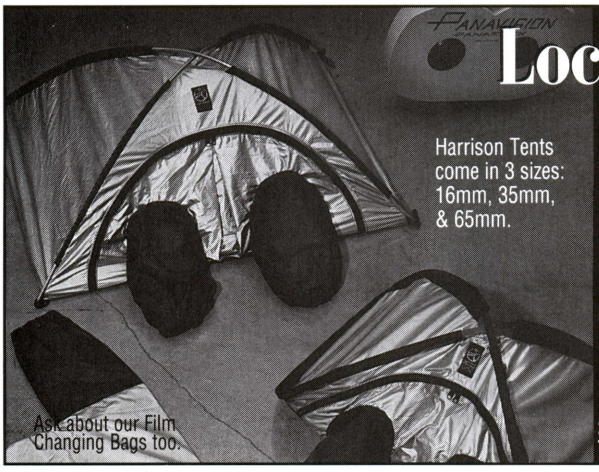

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software package can be run on Silicon Graphics workstations. By tightly integrating a suite of 3-D and 2-D modeling, animation and compositing tools in a complete, user-friendly interface, animators will spend more time creating instead of alternating between software packages.

Houdini 1.1 includes trimmed surfaces, a new set of character tools, and a powerful developer's kit. The character tools allow artists to quickly animate faces and sophisticated, skeleton-based characters with multi-bone inverse kinematics. The developer's kit, with which Houdini itself was built, gives software developers complete access to the libraries necessary to extend Houdini's capabilities. The kit complements the existing set of highly customizable commands and expressions that are at the heart of Houdini.

The program has a suite of 72 CAD-strength modeling tools combining NURBS, polygons, Bezier splines, metaballs, and particles in a fully integrated environment. Users can model and animate interactively in a perspective 3-D viewport using precise and intuitive direct manipulation.

Houdini's unique and pervasive procedural networks are key to optimally-crafted solutions and can be edited and reconnected freely, even while the animation is playing. By eliminating the need to remember construction steps or to always start from scratch, the intelligent networks allow animators to devote more time and energy to creative thinking and refinement.

Houdini runs on all Silicon Graphics workstations with IRIX 5.3 or 6.2.

Side Effects Software, (416) 504-9876, Fax (416) 504-6648, Internet: sidefx.com.

Graphics and Effects Product Upgrades

At NAB '97, Avid Technology, Inc., announced the shipment of version 4.0 of its Media Illusion digital effects environment and version 7.2 of its Matador paint and 2-D animation software. Avid also demonstrated an upcoming release, version 3.0 of its Jester digital ink and paint software for cartoon animation.

Version 4.0 of the resolution-independent Media Illusion compositing

and effects software runs on the full range of Silicon Graphics workstations, including the new O2 and Octane. The software incorporates a powerful new multi-point tracking and stabilization module, integrated paint, user-configurable tool bars, client-server support and new DVEs. It also expands Media Illusion's array of effects with support for Tinder Tools, a third-party plug-in application from The Foundry which allows artists to create glares, flares, distortions, glow and other effects. Version 4.0 supports version 2.0 of the Open Media Framework (OMF) Interchange, enabling closer integration with Avid's digital editing products through the ability to easily import and export AVR 75 3:1 images and AVR 77 2:1 images for video and AVR 4 or AVR 6 images for film.

The new version of Matador will incorporate support for SGI's new O2 workstation. Currently, version 7.2 supports SGI's Octane, featuring dual processor and high-bandwidth memory and networking capabilities, as well as improved integration with Avid's Media Composer digital editing systems via support for Avid's AVR 77 images. The new version also allows the ability to render frames or fields directly to a digital disk recorder, in the background or even on a separate machine.

Jester 3.0 includes new tools to accelerate and simplify the cartoon production process as well as enhancements which allow the progress of projects to be checked at any stage. Key features include an integrated, fully-featured and customizable paint module, graphical management system, redesigned interface, I/O support for a wide range of flatbed scanners, support for host-independent image processing (HIIP) and Tinder Tools effects, and OMF compliance which will enable files to be transferred to and from Avid's family of digital nonlinear editing systems.

Avid, (508) 640-6789, Fax (508) 640-1366.

Audio Editing for Video Workstations

Sonic Foundry, Inc. and Intergraph Corporation, makers of video authoring workstations, have formed an agreement to integrate Sound Forge 4.0 into all StudioZ RAX video authoring and ensembling workstations.

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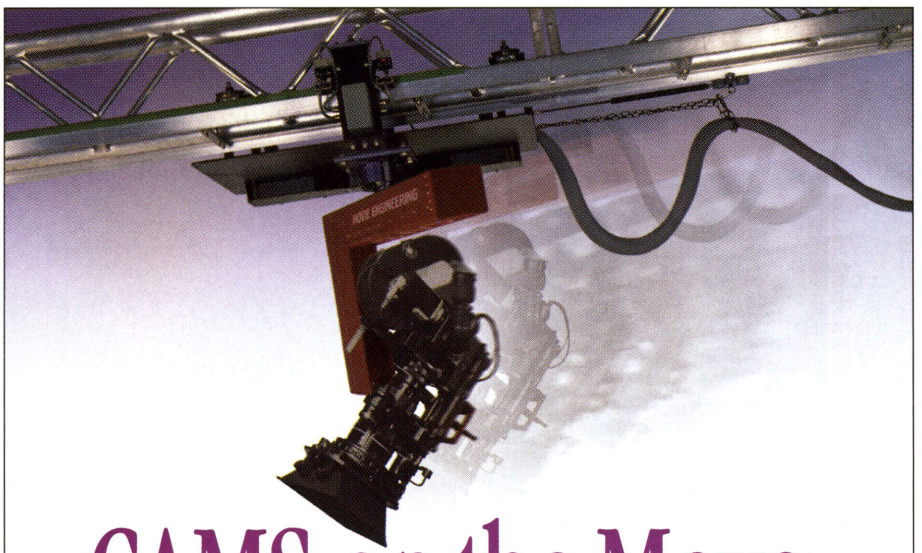

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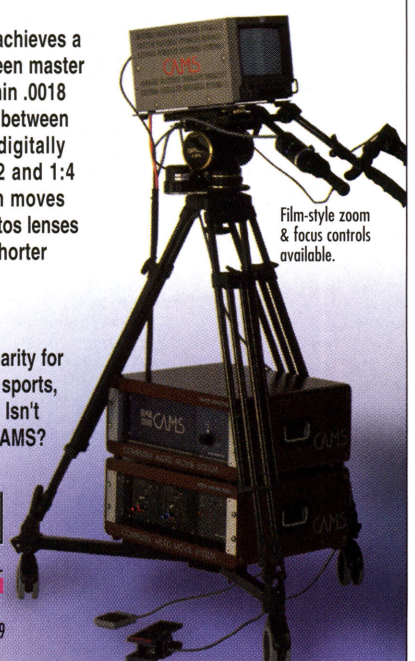
On the Go.
CAMS is gaining popularity for features, news events, sports, and live performances. Isn't it time you moved to CAMS?



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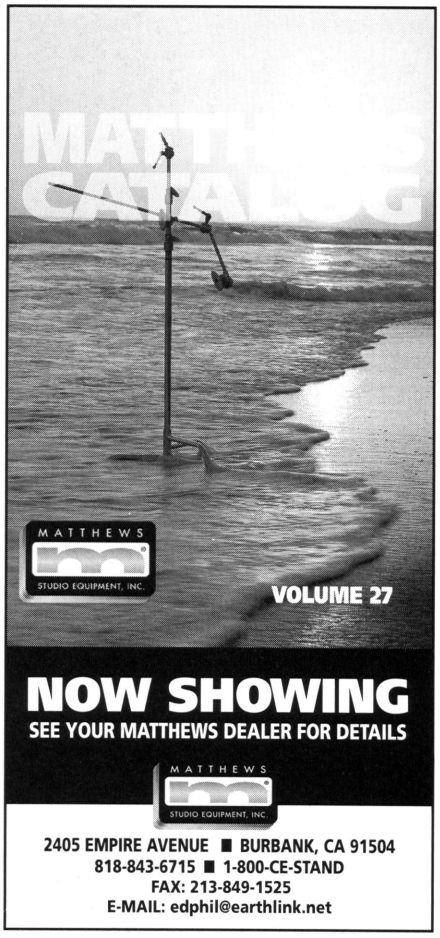
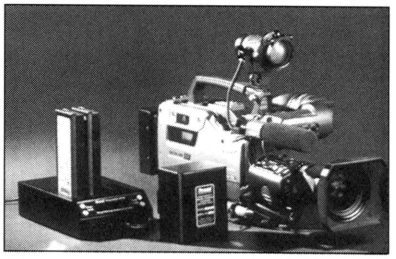


Video content creators and CGI animators in the market for an Intergraph workstation on the Intel/Windows NT platform can take advantage of Sound Forge 4.0's audio editing capabilities.

Sound Forge 4.0 includes a comprehensive list of audio effects and processing tools. The professional audio editor is extendible through a full-line of proprietary and third-party plug-in modules dedicated to specific tasks such as batch conversion, noise reduction, and audio CD burning.

Sonic Foundry, (608) 256-3133, Fax (608) 256-7300, Internet: sfoundry.com.



Frezzi's Advanced Chargers

Frezzi introduced their new line of advanced chargers at NAB '97. The new models M2100 Charger/Power Supply and M1100 Advanced charger use the latest RISC processor. Built with quality control parts and systems checks along with MIL-STD-2000 soldering and assembling staff, Frezzi has put together an advanced technology charger line with an emphasis on human factors and cost effectiveness.

Incorporating a fast charger, discharger, analyzer and power supply into one state-of-the-art unit, the feature-rich and extremely user-friendly M2100 can charge, discharge and maintain any type of professional battery, or power your lights and camera. An alphanumeric LCD display provides complete diagnostics at a glance. Lightweight (3.5 lbs.) and streamlined (10" x 6.25" x 2.75"), the M2100 is encased in the finest high-strength, laser-cut aircraft aluminum and was designed by military engineers.

The M1100 is an economical but powerful and advanced charger, without the multiple functions of the M2100 described above.

Frezzi Energy Systems, (201) 427-1160, Fax (201) 427-0934, Internet: frezzi.com.

Color Micro Camera and Portable Projector

Elmo introduces its most advanced DSP (Digital Signal Processing) CCD color micro camera, model MN421E, which permits one camera control unit with ½" CCD and ¼" CCD camera head interchangeability.

The unit delivers more than 470 TV lines (H) of resolution and features an automatic electronic shutter ranging from 1/60 to 1/50,000 second. The shutter also incorporates nine selectable speeds from 1/60 – 1/10,000. The small camera head weighs only 0.6 ounces (without lens or cable) and measures 0.67" diameter and 1.53" in length, making it ideal for the monitoring of critical areas with severe space limitations, machine vision, nondestructive testing, medicine, surveillance and a host of other applications. This camera also offers excellent lumination characteristics of five lux at F1.6 to two lux at F1.0. White balance is automatic, but can also be set manually. The internal/external sync system features automatic change-over. An on/off "sens-up" gain switch adds +6dB when activated.

The MN421E also incorporates an on-screen menu display and full RS232C control through one's PC. S-Video and composite outputs are built-in. There are 13 optional microlenses ranging from 3mm to 25mm, including a pinhole and several close-up configurations. The CCU weighs only 13.7 ounces and measures 3.35" x 1.57" x 6.14". Cable lengths (optional) between the camera head and CCU are available from 2m to 30m.

Elmo also offers a full-featured 3 LCD Multimedia Projector — model EDP-2100. It features the most advanced optical-intergrator technology available, using three active-matrix TFT Polysilicon LCD delivering 832 x 624 pixels (x3) images. The bright 500 ANSI lumen units delivers professional-quality images on small or large screens from 23" to 300" diagonal. It has true SVGA resolution of 800 x 600 dots plus compressed XGA (1020 x 768), VGA and MAC-16. The projector is equipped with an optically superior f3.6-4.1 multi-coated zoom lens.

The supplied wireless remote controller permits the user to operate the completely self-contained projector (display, sound and light source). It also has an RS-232C port for integration with ex-

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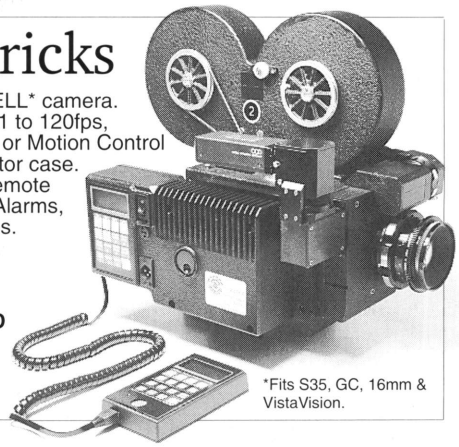

*Fits S35, GC, 16mm & VistaVision.

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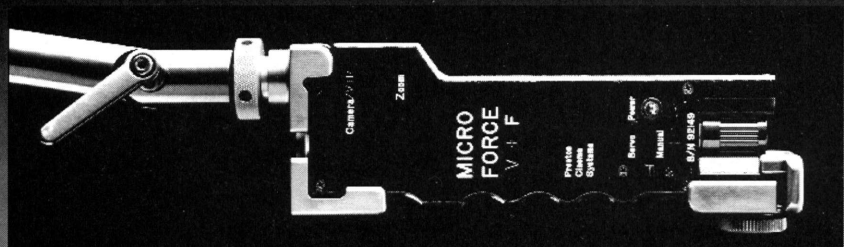

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ternal control systems. The device can project images from most Apple or IBM-compatible desktop, laptop and notebook computers as well as NTSC, S-video, PAL and SECAM video sources. The EDP-2100 also features a built-in sound system. For complete flexibility, the projector offers a host of convenient inputs including RGB, audio for RGB, video and audio for video. Output modes include RGB, video and audio (stereo minijack).

The projector measures 12.6 x 6.7 x 17.9 inches, weighs approximately 21 pounds and fits most airline overhead baggage compartments. It's available complete with a power cord, VGA signal cable, MAC-16/VGA adapter, wireless remote control with batteries, and lens cap. Optional accessories include ceiling mount, user-replaceable lamp module, soft carry/storage bag and hard carry/storage case with wheels and retractable handle.

Elmo, (800) 947-2900.

Pressure-Sensitive Tape-Backed Fabric

Pro Tapes and Specialties announces DuvePro, a pressure-sensitive tape-backed polyester/felt black fabric that has been specifically developed to replace the use of Duvetyne cloth in theater, motion picture, TV and photographic applications.

DuvePro's tape-backed construction eliminates the need to staple, tack or nail and then spray the Duvetyne to cover hot spots created by tacks or staples. Simply roll out as much DuvePro as needed, peel away the paper backing, and apply to painted surfaces, plastic, wood, metals — even very thin fabrics.

Velcro-compatible and non-reflective, this matte black felt/polyester fabric is laminated with a specially-developed acrylic adhesive that makes it easy to remove and adhere — even if it's been on for a long time — without leaving any sticky residue. It comes in 25-yard rolls and is available in eight widths, from 2" to 48."

Pro-Tapes and Specialties, (800) 345-0234, Fax (908) 346-0777.

Super 16 Zoom Lens

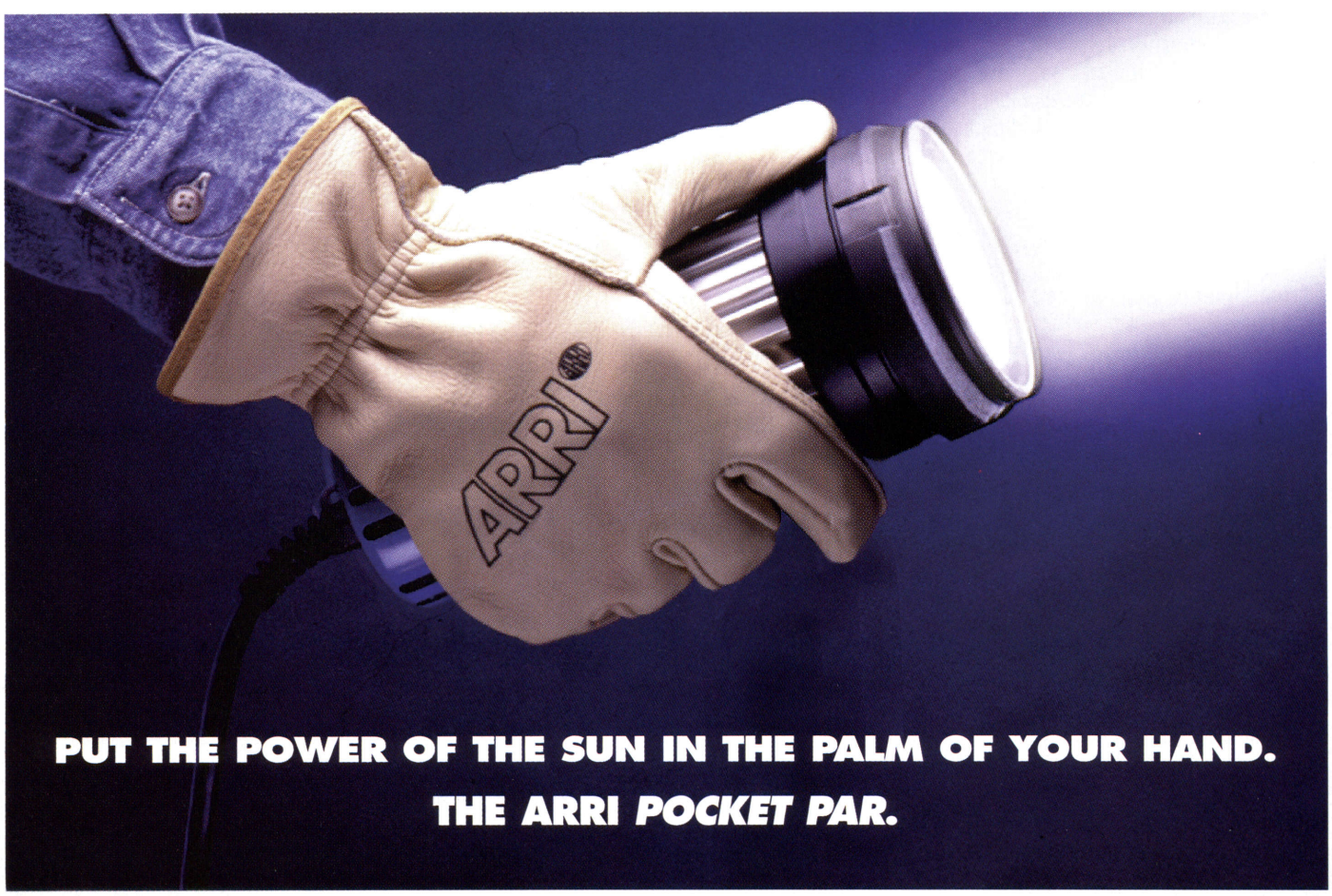
Optex now offers the 33x OpTex/Canon 14.5-480mm Super 16 zoom lens, which with an optional x2 extender increases the range to 29-960mm. This T3 lens is intended for

drama, sports productions or wildlife documentaries, and is available with either an Arriflex PL, Arri bayonet or Aaton mount.

Zoom, focus and iris controls are engraved with large luminous numbers (T-stops for iris; feet and meter scales). The lens features zoom, focus and iris gear rings that are compatible with studio follow-focus rigs, manual fluid zoom drives and motorized control systems.

Other accessories offered are production matte boxes supported by a bridge plate, sunshades accepting 138mm filters and x2 Super 16 range extenders for all three mounts.

OpTex, U.S. (201) 335-4460, Fax (201) 335-4560, E-mail: les@zgc.com; International (0)181-441-



2199, Fax (0)181-449-3646, E-mail: info@optexint.com; Internet: optex int.com/optex.

Quick-lock Tripod Plate

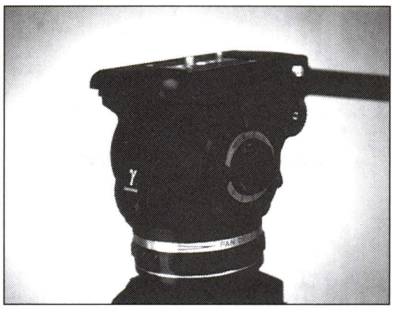
Chrosziel of Munich has unveiled a sturdy new tripod baseplate system designed exclusively for Betacams and other cameras which use a Sony tripod plate (including BTS, Ikegami, etc.). The plate guarantees a fast and rigid connection between camera and tripod. The camera is fixed in two points through a single lever. A slide of the lever lets the operator remove the camera from the plate.

Band Pro Film/Video, (818) 841-9655, Fax (818) 841-7649.

Gamma Fluid Head

Cartoni introduces the new Gamma Fluid Head, specifically designed for dockable camcorders weighing from 15 pounds (6.8kg) to 35 pounds (15.9 kg). It also offers advanced features including infinitely adjustable tension settings, Euro-quick release and a full 180-degree tilt range.

With variable counterbalance, the Gamma accommodates offset payloads such as long lenses and top-mounted viewfinders. An ergonomic knob offers convenient lockdown. Patented fluid-damping modules offer adjustable tension settings for both pan and tilt modes that ensure constant drag and smooth camera movement throughout the range.



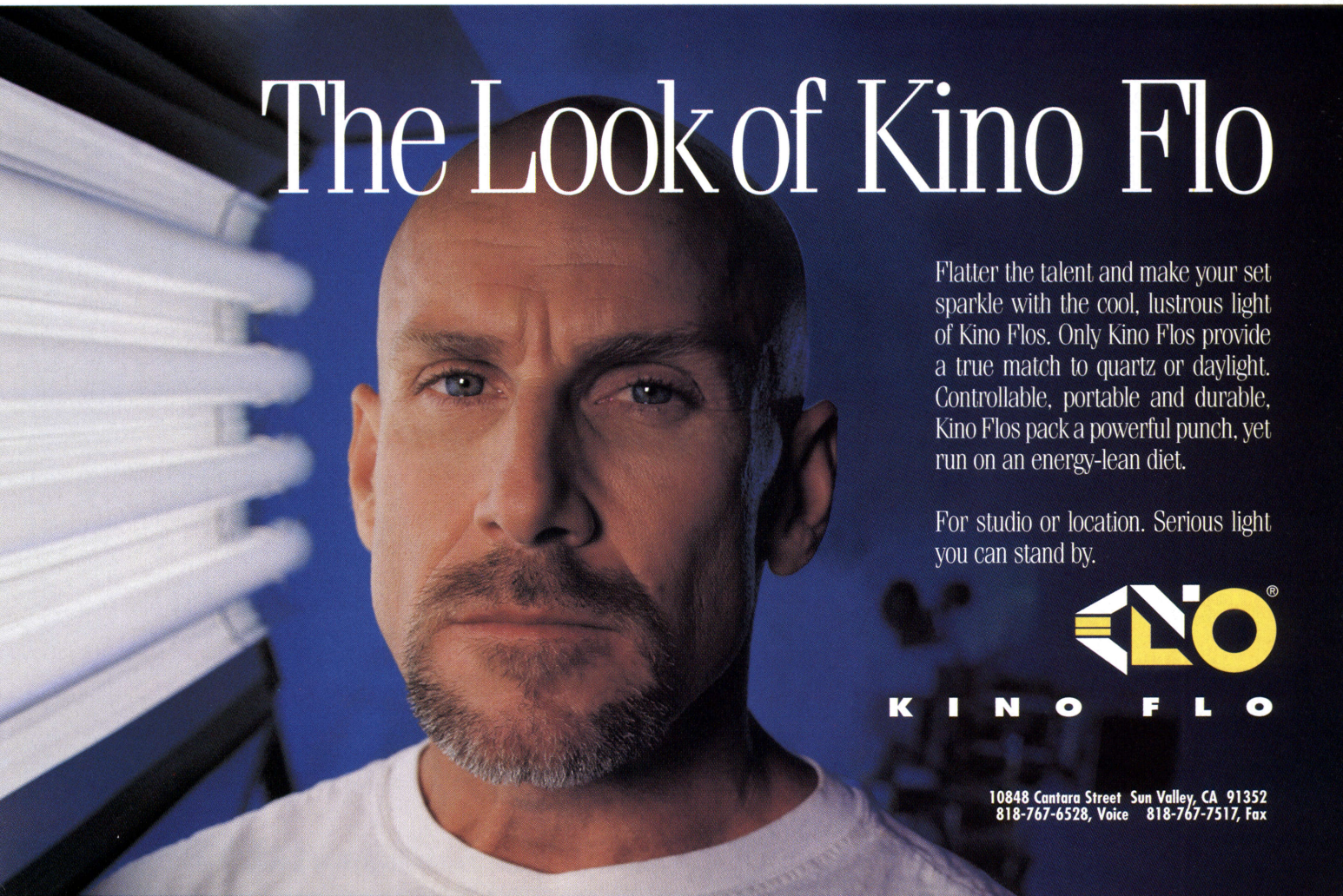
The unit comes equipped with a 100mm bowl, 100mm sliding base plate; European-style quick-release with easy-access safety lock, easy-to-read engravings and a handy illuminated bubble level. A wide range of Cartoni aluminum and carbon fiber tripods, spreaders and dollies is available to complement the Gamma Head.

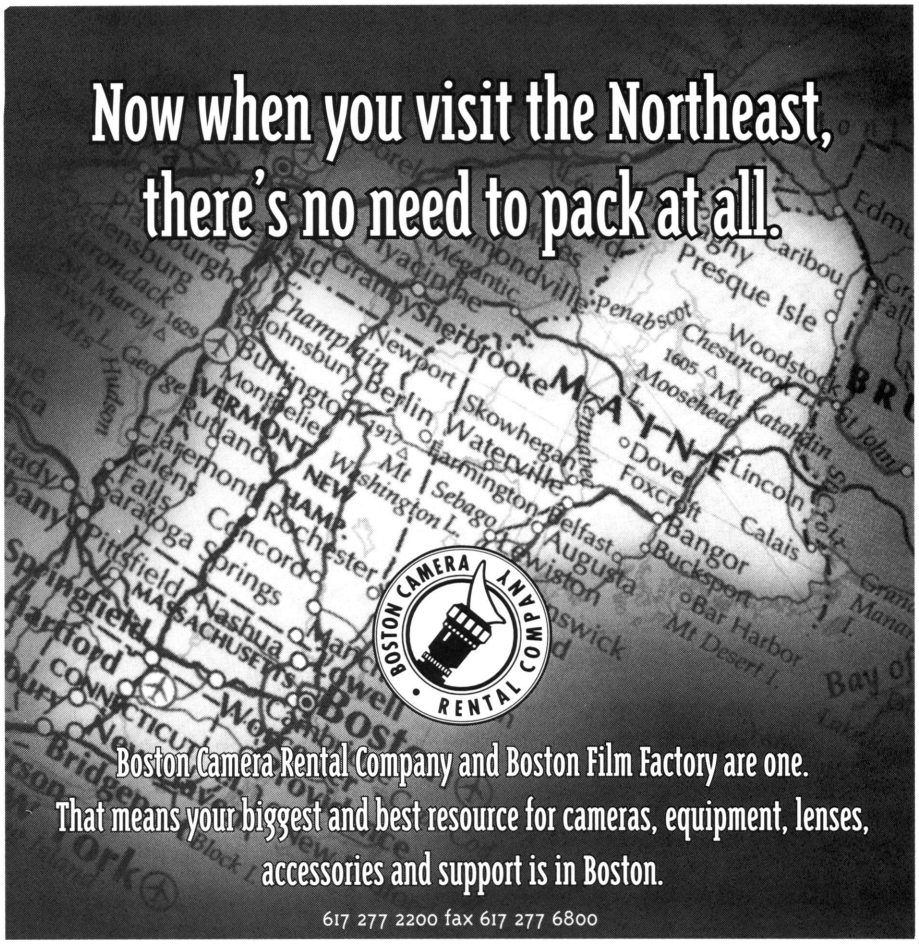
Cartoni USA, (805) 520-6086, Fax (805) 845-6619.

Five-Pattern UMT 800 Microphone

G Prime announced the first deliveries of the long-awaited Microtech Gefell UMT 800 large-format condenser microphone. Sporting a sizable head grill, this distinguished-looking microphone is the company's first model with five switchable polar patterns. The pickup capsule is the "classic" M7, a pressure gradient transducer using dual membranes and a single brass back plate. The large-diameter plastic membranes are sputtered with gold. Varying the polarization voltage to the membranes with the pattern switch, located just below the head grill, produces five patterns: omni, wide cardioid, cardioid, hypercardioid and figure 8. The direction of maximum sensitivity is radial to the head grill, i.e. side-addressed.

The microphone amplifier is a transformerless design with a symmetrical output stage. This design yields a wide dynamic range and a low self-noise floor. The sensitivity can be reduced by a 10dB switch, mounted on the body of the mike, when miking extremely loud sound sources. A low frequency roll-off switch, also mounted on the body of the





New Videotape

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This updated videotape demonstrates how to make your films more visually exciting. It also shows you how to produce them in less time with fewer setups. The video has been described by most people who have viewed it as the best film of it's type ever made. Send $10 which will be refunded when the video is returned.

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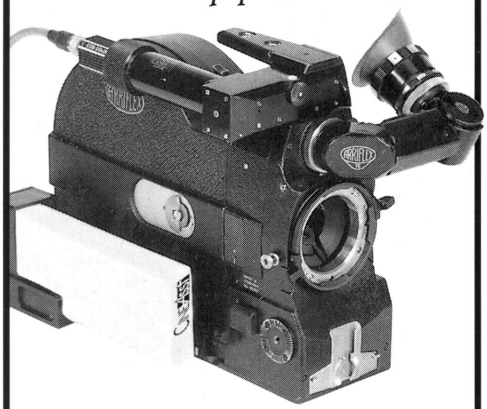

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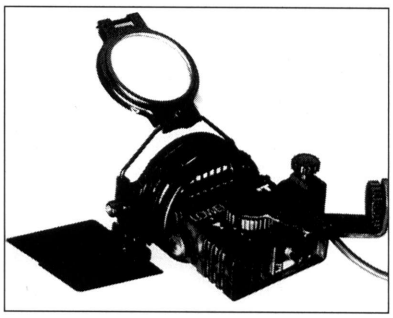
mike, reduces proximity effect when close miking.

The UMT 800 is intended for voice-overs, as well as high-quality sound pickups in professional music studios, broadcast and television studios, and motion picture soundstages. It is available in matte black and satin nickel finish. The microphone's solid-state transformerless amplifier uses industry-standard, 48-volt phantom powering according to the international standards DIN 45596 and IEC 268-15. Included in the purchase price are the MH 80 swivel and 25-foot cable. The EA 92 elastic suspension is available as a separate accessory.

Microtech Gefell GMBH, (212) 765-3415, Fax (212) 581-8938.



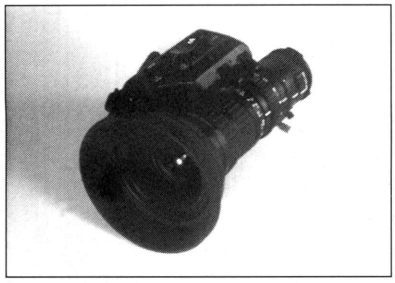
Dimmable Fixture

Lowel introduces the i*d*-Light, which offers dimming and focusing for better light control. The integral DC dimmer uses solid-state microelectronic pulse-width modulation technology to control the amount of energy supplied to the fixture. The high-switching (20kHz) dimmer allows for smooth dimming and prevents acoustical noise from being emitted from the bulb. Other i*d*-Light features include: 12v/14v, 55- or 100-watt lamps; interchangeable reflectors; and ViP light control and mounting accessories.

Lowel-Light Manufacturing, Inc., (800) 334-3426.

New Wide-Angle Video Lens

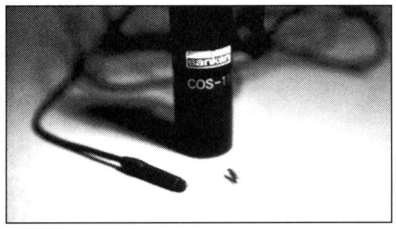
Fujinon introduces a low-cost, wide-angle ENG lens for ½-inch format color cameras. The S12X5BRM lens has an extremely wide angle of 65 degrees. The lens features electron beam coatings, which improve contrast while reducing flare and ghosting to the lowest possible levels. It also features a comfortable servo grip with all functions eas-



ily accessible by hand, which complements the lens' compact design (183mm) and light weight (1.2kg).

The lens has a focal length of 5 to 60mm; MOD of 0.5 meters; F-number of 1.8 from 5 to 54mm; and 2.0 at 102mm; and an iris range of f1.8 to f16.

Fujinon, (201) 633-5600, (201) 533-5216.



Ultraminiature Microphone

Audio Intervisual Design introduces Sanken's ultraminiature COS-11S lavalier microphone. It features a 2.1mm cable with a 0.5mm cable jacket — twice as thick as previous models. The new cable smoothly matches the entry connector, preventing snags when pulled through hair or clothing.

The new COS-11S cabling was developed in conjunction with England's Autograph Sound Recordings, a musical-design company known for theater systems. The microphone is rugged and highly impervious to body humidity associated with rigorous stage, film and TV production. Sanken utilizes exclusive vertical placement of the diaphragm for a greater effective area within a much smaller casing.

Audio Intervisual Design, (213) 845-1155, Fax (213) 845-1170.

Digital Amplifiers and Switchers

Kramer Electronics now offers the BC-7000, a line doubler that has digital image processing capability to enhance, color correct and control brightness and contrast. The doubler — which may be used with any large-screen projector having DATA inputs — also fea-

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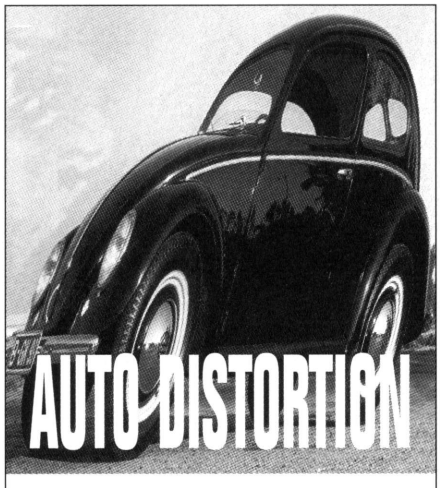

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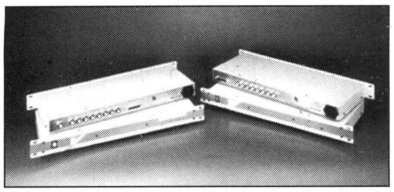


tures a built-in splitter for a before/after picture comparison. Other features include adaptive filtering for clean screen image, image stabilization to steady jittery sources, multi-standard video input and user-selectable output resolution.

Two affordable digital switchers are also included in the family: the BC-7308 is an 8 x 1 digital switcher that detects and separates the sync, and switches at the vertical interval. The BC-7388 is an 8 x 8 digital matrix switcher with a built-in memory that allows set-ups to be stored and set, and has a large seven-segment display of switcher status. Both are compact in size, have re-clocked outputs for low-jitter, equalize the selected inputs and can be controlled via computer or manually.

The BC-7108 is a serial video distribution amplifier with one input and eight outputs, plus a parallel ECL output. It has automatic equalization up to .30dB for loss on 75ohm coaxial cable and relocking for low jitter on all outputs. Complementing it is the BC-7208, an adjustment-free serializer/distribution amplifier. It embeds the clock and parallel data into an NRZI serial stream according to SMPTE 259M and relocks the output to provide eight low-jitter, serial-digital outputs. Both amplifiers recognize the following standards: 4fsc PAL, 4fsc NTSC, component 4:2:2, and high-definition 16:9 widescreen. The BC-7208 also automatically recognizes word lengths, allowing them to be used for both 10-bit and 8-bit video signals.

Each device operates on 115v AC and can be easily inserted into existing racks.

Kramer Electronics, (888) 303-5600, E-mail: kramer@netvision.com.

DVD-RAM Disc Samples

Hitachi Maxell has begun shipping one- or two-sided (2.6 versus 5.2 GB) rewritable DVD-RAM discs, which can be read in next-generation CD-ROM drives. Maxell applied its established optical disk manufacturing techniques to DVD-RAM by employing submicron-controlled disc substrate manufacturing and

bonding technologies, as well as exclusive phase-change recording layer production processes. Type I discs—which cannot be removed from the cartridge—comes in both single and double-sided formats; Type II discs are removable but come in only a single-sided format.

Increased track density and improved reliability is achieved by Maxell using wobbled land and groove formatting. In addition, the phase change recording layer utilizes Mark Edge Recording to increase pit density and boost capacity. The recording thermal layer has also been optimized to enhance overwrite recording reliability.

Maxell (201) 703-2168, Fax (201) 796-8790.

Multi-purpose Lighting Fixture and Video Gear

Cool-Lux Lighting announces their latest movie/video/still lighting fixture, the Combo-Light. This lightweight and versatile tungsten fixture is adaptable for use in a variety of configurations to suit broadly varied lighting requirements in the studio or on location.

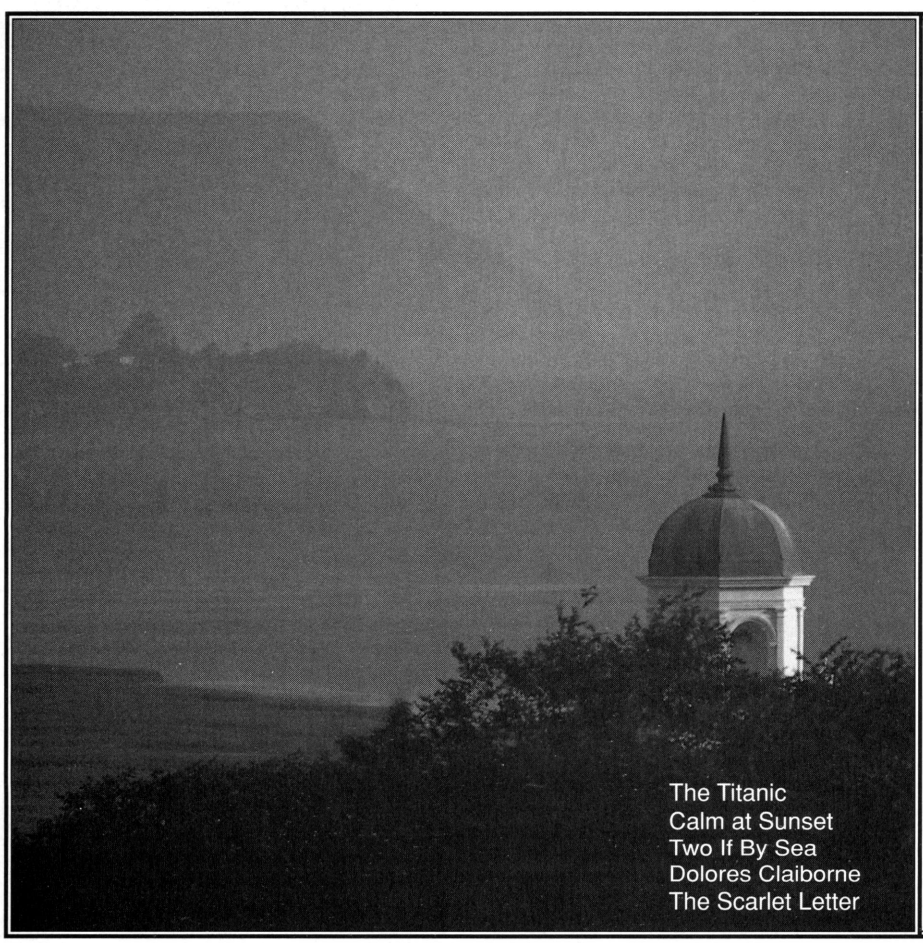
The basic, small and portable fixture is a raw floodlight that accepts conventional quartz lamps ranging in output from 300 to 1,000 watts. It can be easily attached to any standard ⅝" light stand then can be swiveled or tilted to point in any direction. An optional diffusion frame can be slipped over the fixture when softer lighting is required, or it can be used with an umbrella. Either of these basic configurations are ideal for location uses when both lightweight and portability are prime factors.

When more gentle, diffused, shadowless illumination is needed, the fixture can easily be slipped into an optional Soft Light Hood which bounces the intense light off of a large white surface to reflect light upwards and then out towards the subject. When more control is needed, a gel frame holder can be placed inside the frame of the hood to accept either translucent diffusion material or colored gels. Also optional is a set of four-way barn doors.

The basic Combo-Light fixture when used as a flood measures only 4.25" x 1.875" and weighs only two pounds. With the Soft Light Hood attached, its size increases to 14" x 9" x 6" and the weight doubles to four pounds.

Cool-Lux also offers a Light and Sound Bracket that enhances the versatility of the camera shoe by doubling the possible number of shoe-mount accessories, and raises the operating position of a shoe-mounted light two inches above the camera shoe. This bracket is finished in flat black and has a screw-down locking ring that securely holds the bracket to the camera accessory shoe. The two shoes on its top have no pin-stops so they are accessible from either end; this makes it simple to slide on any shoe-mount device from either the front or the rear, then locks tightly to the bracket using the lock typically found on each accessory. The bracket has a standard socket in its base so it can be mounted onto a light stand when it's preferable to have two shoe-mount accessories used in this manner.

Also available is the StableCam, a new padded side-grip for compact camcorders, which attaches via a tripod screw and then protrudes up along the normally non-functional left side of a camcorder. On top of the grip is a useful accessory shoe for attaching a small video light, stereo microphone or an external LCD screen viewfinder. It also offers the following features: stability and freedom for panning and tilting the camera with steady results using the



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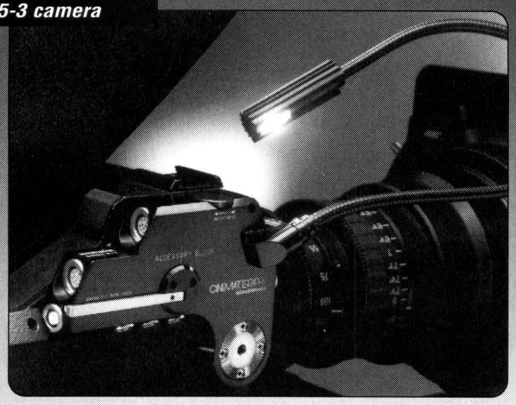

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left hand; unlimited freedom of movement; a quick-release mechanism for easy removal from camera.

The StableCam can also be packed away with the camera in its standard case, and weighs only .9 ounces. The unique grip's positioning allows even the pudgiest of fingers to hold it tightly, leaving easy access for operating controls on the left side. When the camcorder is in use, the right hand becomes free to either give visual directions to the subjects being taped, or control the cameras' push buttons while the left hand securely holds the entire assembly.

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The unit's full editing facilities allow reports to be compiled without any additional hardware. As you record, the unit creates an EDL that logs all audio material. This list includes information such as the take number, start time, duration, the compression mode, and a mono/stereo indication. In edit mode, you can place the takes in any particular order, and cut and past sections accordingly. All editing is non-destructive, so there is no chance of losing original takes. Fast audio cueing is provided to speed up the process of finding and identifying the desired audio segments.

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Microphone inputs are via balanced XLRS, with switchable +48v/+12v Phantom and "I" power. Analog outputs are on balanced XLRs, complemented by a single AES/EBU XLR output and banana telephone output with transformer. The lightweight (approx. 6.5lbs./2.95kgs.) and rugged unit is powered by standard "D" cells, allowing up to 15 hours of continuous use, and due to its solid state construction operates in extreme temperatures from -20° to 60°C.

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Enhancements in ICEfx 3.0 expand the range of special effects that are optimized to run many times faster on ICEfx systems — and allows the sharing of "ICEd" files across workgroups. ICEfx 3.0 introduces the first of many "ICEd" versions of filters from DigiEffects, Inc.— Aged Film—along with ICE-developed new special effects such as 3D Relief, LightBlast and Water Waves.

ICEfx3.0 also includes the hardware-independent versions of the ICEfx software. This enables a major improvement in user workflow because projects can be shared between systems running with and without the 16 processor GreenICE board. Workgroups can send projects to a centralized ICE'd system for final renders. The ICEfx 3.0 systems are immediately available for the selected Macintosh and Daystar models. Support for Windows NT is planned to coincide with the release of Adobe After Effects for Windows NT.

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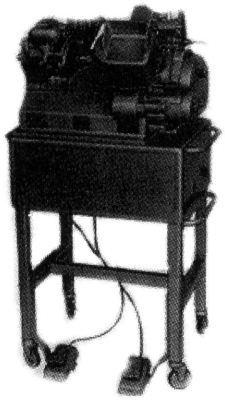

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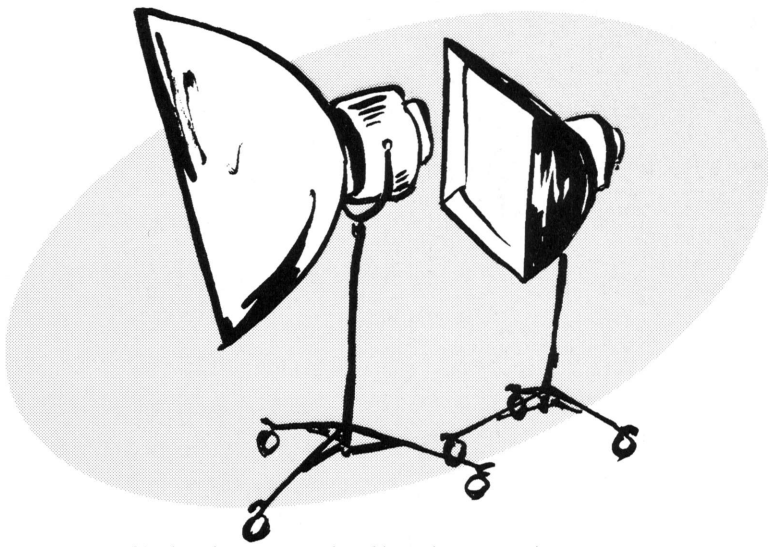

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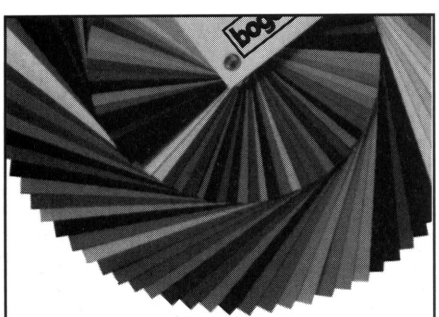

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Emerging Sexuality is Exposed in *Ripe*

by Brooke Comer

Ripe, the first feature from New York filmmaker Mo Ogrodnik, spins a lyrical tale of budding sexuality experienced by sisters Violet (Monica Keena) and Rosie (Daisy Eagan). They are orphaned runaways who seek refuge on an army base; the tomboyish Rosie rebels against the camp's testosterone-charged atmosphere, while Violet revels in her nascent sensuality.

In searching for a cinematographer, Ogrodnik sought an individual capable of nurturing a comfortable environment for the 14-year-old actresses — a necessity, given that *Ripe* involves scenes of a near-rape, a first menstrual period and masturbation. She eventually chose German-born Wolfgang Held *(Wigstock: The Movie, Nothing and Nowhere),* a veteran of the 16mm realm eager to take his first crack at a 35mm production.

"Wolfgang and I both come from a documentary background, which was important to me," says Ogrodnik, who, while studying at Harvard, directed *Richard and Nicole*, an award-winning documentary detailing a transsexual's attempt to launch a women's group in a Unitarian Universalist Church. "The fact that Wolfgang and I were both documentary filmmakers gave us a common frame of reference; we were coming from the same place emotionally and aesthetically."

Held and Ogrodnik worked closely during preproduction to map out the details of every scene, which helped them to stay on track during the production's 21-day shooting schedule. Says the director, "The project was really a shared vision that came together over a period of months, during which we looked at movies and photographs together. Our collaboration was more in the European style, where the cinematographer is a partner in the conception of the film. We looked at Nan Goldin and Sally Mann photographs, and films ranging from *Paris, Texas* [shot by Robby Müller, BVK, NSC] to *The Deer Hunter* [photographed by Vilmos Zsigmond, ASC]."

When conveying the girls' initial sexual encounters, Ogrodnik refused to court romantic cliché: the director opted for a recycling shed with insects buzzing in the background for a masturbation sequence, and set Violet's deflowering in a blue room with a lone bed, starkly lit with one lightbulb.

Filming was originally scheduled to take place at Camp Smith in upstate New York. But on the eve of production, after thousands of dollars had already been spent on set construction, the Pentagon revoked use of the camp on the basis that *Ripe*'s narrative portrayed the military in an unflattering light. What could have been a devastating setback turned into a blessing, however, when film commissions from around the country offered alternatives. Ogrodnik soon found that the old Quonset huts and barbed wire fences of an abandoned Air Force base in Aiken, South Carolina fit what she had imagined while penning the film's script. "Originally, I'd wanted to make the film in a Southern location with a steamy, humid look, and Camp Aiken gave me exactly what I wanted," she says.

Ogrodnik also chose to flash the film prior to film exposure. "This enabled the form and content of the film to mirror each other effectively," she maintains. "I wanted to get that faded, orangey look of Seventies' films like *Midnight Cowboy* [shot by Adam Holender, ASC]." Flashing also provided the perfect metaphor for *Ripe,* which "is about shedding light on what it's like to be a young girl coming of age."

Though intrigued by the idea of

flashing, Held had initial doubts. When the first tests proved disastrous, the cinematographer wanted to forsake the idea entirely. "At first, I found the VariCon hard to control," Held says of the Arriflex device he used to flash light on the film during exposure. "I suggested that we just smoke the sets and control the colors instead. But Mo was adamant, and we stuck to it. Once I got used to the system, I was glad we did."

Held supplemented the flashing process with colored gels. For a nighttime bonfire scene, he flashed the stock with a double straw gel. "When you flash at night, the blacks get slightly orange," Held explains. "That makes the night come more alive, enhances the other colors and creates a less harsh look all around."

For the closing scenes of *Ripe*, Ogrodnik wanted an eerie look which suggested that a harsh reality had descended upon the sister's lives. Held employed blue gels on his lights, and didn't use any 85 correction. He explains, "Without 85 correction, the whole color palette became more blue. We lost the reds and got a more drained, institutional look."

While flashing allowed Held to open up the blacks, make them less dense, and create more illusional space, he also credits Kodak's discontinued 5287 stock, "which some cinematographers didn't like because of its grainy highlights. But I liked the stock's interesting texture, and the way it sees into the shadows; this allowed me to do a lot of lighting from the outside with very little fill inside. I was basically lighting a very flat stock with very contrasty lighting." Ogrodnik adds that the 87 stock "helped us get away from the 'Kodak moment' look, where the blacks are really popping. The combination of flashing the film and using the 87 stock gave *Ripe* a surreal quality that's effective in telling a sexual tale." ◆

*[**Ed. note:** Having recently relocated to California, Brooke Comer has stepped down as AC's East Coast contributing editor, and will no longer be penning the Points East column. Those responsibilites will be assumed by longtime New York-based contributor Eric Rudolph. Brooke will continue to write articles from her new, sunnier locale.]*

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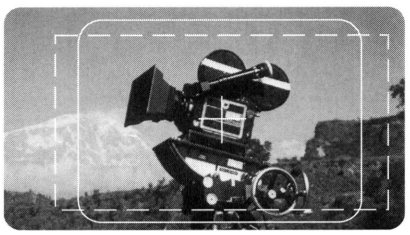

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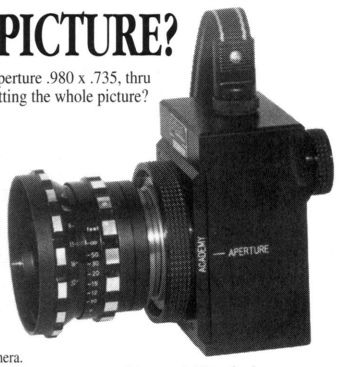

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Books in Review

by George Turner

David Lean
by Kevin Brownlow
St. Martin's Press,
831 pps., cloth, $40

However tormented David Lean's private life appears to have been, the British director was in some respects the most fortunate of men. Although memories of a dark and troubled childhood must have haunted Lean during production of his Dickens films — *Great Expectations* (1946) and *Oliver Twist* (1948) — these traumas probably contributed to the greatness of both. And his own fractious nature may have provided some insights when he was probing the soul of England's most enigmatic adventurer in *Lawrence of Arabia* (1962). He gave his all to his work — progressing from gofer to assistant cameraman to film editor to director — leaving in his wake a tangle of unhappy marriages, stormy relationships and fine films. As Oscar Wilde observed, "We pay for what the gods give us."

Lean was a genius in his chosen field, and thus became the envy of anyone who aspired to create great cinema. He was also fortunate to have placed the telling of his life in the hands of Kevin Brownlow, a fellow Englishman whose accomplishments as a film historian and director of film-oriented documentaries are of the highest caliber. This epic biography about a maker of epic films is a worthy companion to Brownlow's *The Parade's Gone By* and *The War, the West and the Wilderness.* The tome's greatest strength is that it's fashioned almost entirely from primary research, with minimal reliance upon any earlier works on Lean. In addition to the reflections of Lean himself, there are also enlightening passages gleaned from conversations with wives, lovers, relatives, actors, co-workers and colleagues.

There is much information from and about the brilliant cinematographers with whom Lean worked: Ronald Neame *(In Which We Serve, This Happy Breed, Blithe Spirit, Brief Encounter);* Guy Green *(Great Expectations, Oliver Twist, The Passionate Friends, Madeleine);* Jack Hildyard *(The Sound Barrier, Summertime, Hobson's Choice, The Bridge on the River Kwai);* Freddie Young *(Lawrence of Arabia, Doctor Zhivago, Ryan's Daughter);* and Ernest Day *(A Passage to India).*

Lean is presented as even-handedly as possible, with his virtues and faults all laid out in the open. In some respects, the director was difficult, but he was certainly worth the trouble. Brownlow's fine biography also offers many color, and black-and-white, illustrations including behind-the-scenes photos and production sketches.

The Reel Cowboy
by Buck Rainey
McFarland, 319 pps.,
library binding, $39.95

Buck Rainey, of Tishomingo, Oklahoma, is the Western lover's expert of choice. He has written intelligently about the genre for many years, dishing out solid information and commentary without giving a damn what Freud might have thought of it all. While many writers restrict themselves to the large-scale Westerns of the John Ford-Sam Peckinpah class, Rainey displays a special fondness for the smaller-scaled, action-oriented series with real cowboys such as Tom Mix, Buck Jones, Ken Maynard and Tim McCoy.

Rainey's latest book focuses on how literature and films have romanticized the cowboy into a mythical character far removed from reality. The first section is an essay detailing the drift from realism to myth in cowboy cinema. The second — and best — section outlines the process of written Western work being adapted for film. There are also interesting biographical notes on the likes of Zane Grey, Clarence Mulford, Max Brand, William Colt MacDonald, Stewart Edward White, Luke Short, W. R.

Burnett, Peter B. Kyne and others. Interesting facts emerge: for example, B. M. Bower (of the *Flying U* novels) was a lady named Bertha Muzzey Bower, W. C. Tuttle was president of the Pacific Coast (baseball) League, and Luke Short is really Frederick Dilley Glidden.

Another section concentrates upon films of the great Northwest adapted from the novels of James Oliver Curwood, Jack London and Rex Beach. The finale is a roundup of the appearances of movie cowboys in circuses and Wild West shows. *The Reel Cowboy* offers plenty of good reading, but not as many stills as one might wish for.

Nicholas Ray
by Bernard Eisenschitz
translated by Tom Milne
Faber & Faber, 600 pps., paper, $17.95

Several years ago, we reviewed the excellent *I Was Interrupted*, a collection of the writings of Nicholas Ray (touchingly introduced and edited by his widow, Susan), which included a brief biographical section by Bernard Eisenschitz. Now Eisenschitz has done a full-scale biography of the "rebel director," who came to Hollywood from the leftist Group Theater and was steadfast in his refusal to be pushed into the ruts of conformity. Drugs, illnesses and eccentricities were Ray's recurring stumbling blocks.

Not surprisingly, Ray had an uneven career strewn with misfires and unrealized projects. On the other hand, he produced some genuine classics that reflect a distinctive personal style. *In a Lonely Place*, a Hollywood story unlike any other, arguably features Humphrey Bogart's finest performance. *Rebel Without a Cause* spotlighted the post-war malaise of America's young adults and made a generational icon out of actor James Dean. *On Dangerous Ground* brought film noir to the rural American landscape, and offered excellent acting by Robert Ryan and Ida Lupino. *Johnny Guitar*, despite Ray's battles with its star, Joan Crawford, became a cult favorite.

Nick Ray's interesting life was indeed fraught with unhappiness and turbulence, but Eisenschitz comprehends these complexities so well that the portrait he produces is a rather memorable one. ◆

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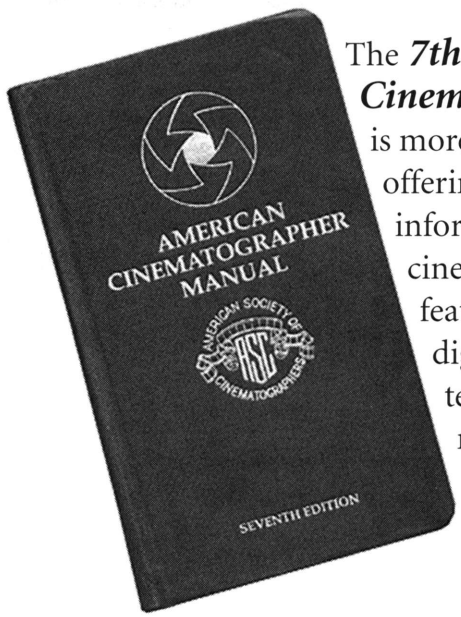

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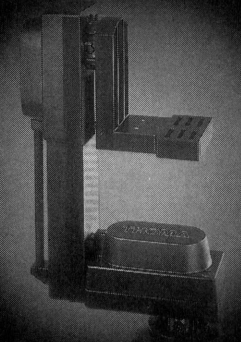

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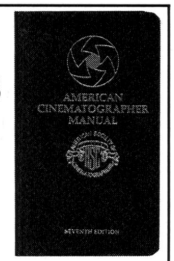

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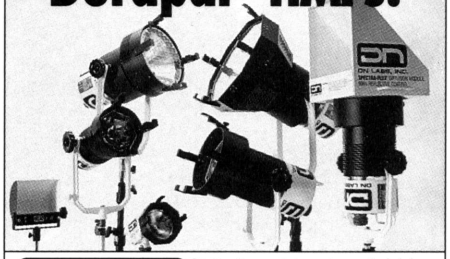

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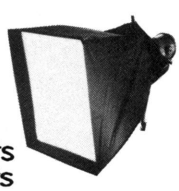

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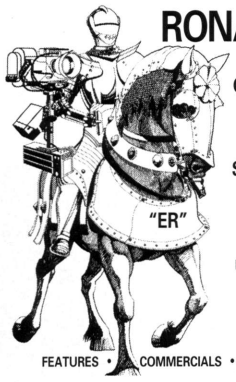

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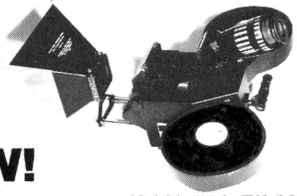

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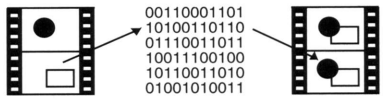

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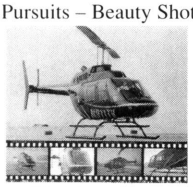

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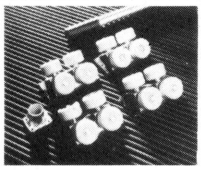

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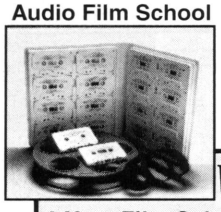

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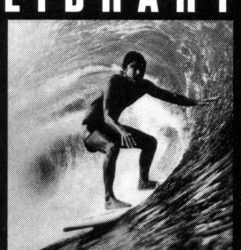

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From the Clubhouse

Roizman Honored

Owen Roizman's alma mater, Central High School, in Valley Stream, New York, recently bestowed him with its 11th Distinguished Alumni Award. The Brooklyn-born Roizman and his family moved to Valley Stream when he was in the sixth grade. While at Central High School, where he graduated with the class of 1954, he was an active athlete — All-Scholastic in baseball and a member of the varsity rifle and soccer teams. Shortly after the ceremony in Valley Stream, the ASC President was also feted by his other alma mater, Gettysburg College, which held an Owen Roizman Film Festival to kick off the ceremonies.

◆◆◆

Historic ASC Papers and Photos to be Housed at Academy's Margaret Herrick Library

The American Society of Cinematographers has made a major donation of historical papers and photographic materials to the Margaret Herrick Library of the Academy of Motion Picture Arts and Sciences, ASC President Owen Roizman and Academy President Arthur Hiller announced recently.

The donated materials, to be maintained in the Herrick Library's Special Collections Archive as "The American Society of Cinematographers Collection," comprise paper and photographic files related to the professional careers of all past members of the ASC. Also included are photographic and text files related to the publication of the ASC's *American Cinematographer* magazine, covering the years 1948 through 1989.

The first group of material, which includes such treasures as the original membership applications of many of Hollywood's most renowned cinematographers, is an invaluable source of biographical information on nearly 600 ASC members, Hiller said. The second group consists primarily of photographic materials gathered during the preparation of hundreds of issues of *American Cinematographer*, not all of which were used in the finished magazines.

Notes ASC Chief Operating Officer Victor J. Kemper, "We feel that by making this donation, we are placing the precious documents regarding our organization's founding and later activities into the most capable archival hands and ensuring their survival for future generations. We [at the ASC] do not have the means to provide old photographs and fragile paper documents with the necessary professional care — which is precisely what the Academy's library does so superbly."

Herrick Library Director Linda Harris Mehr noted that the ASC Collection will beautifully complement the library's existing Special Collections holdings, which already include the personal papers of noted cinematographers James Wong Howe, Paul Ivano and Elver Dyer, as well as a wealth of historical motion picture material donated to the Academy by longtime ASC stalwart Charles G. Clarke. Mehr added that the Academy's archival staff is already at work performing the most critical conservation work, and cataloging the collection for eventual use by scholars and researchers. She estimates that the full processing of the entire collection will take several years to complete.

◆◆◆

Change in Date of ASC Golf Tournament

The 14th Annual ASC Golf Classic will take place on Sunday, June 8 at the Camarillo Springs Golf Course with tee-time to commence at 8 a.m. Players should now arrive at the course between 7 and 7:30 a.m. The Wrap Party will be held at the ASC Clubhouse on Tuesday, June 17 with cocktails and hors d'oeuvres followed by dinner. For full information regarding fees and registration, please contact Patricia Armacost at (213) 969-4333. ◆

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SEKONIC IN MOTION

To meet the challenge of light, Sekonic light meters have been on location with leading motion picture, still, and video professionals since 1951.

The **full featured L-718**, offers unique dual axis pivot head, on-demand illuminated digital display, memory function and optional spot attachment.

The **ultra-compact L-308BII** is simplicity itself, no larger than a deck of cards, with big digital display and easy to operate controls.

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And for purists, Sekonic offers the **classic L-398 Studio Deluxe**, reminiscent of the original motion picture analog incident light meter designed over 40 years ago.

Because light is the challenge, let your local motion picture, video or still photo dealer help you put the right Sekonic meter in your hands today. For more details write for a full color brochure, or check out our Web site at **www.sekonic.com.**

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because light is the challenge℠

GAM's New CineFilter Book
The Clear Choice for Better Color!

Actual size: 3.3 x 4 inches
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GamColor CineFilters – deep dyed polyester color that is linked to the polyester base for longer life.

GamColor CineFilters – a full range of CTO's, CTB's, Plus Greens, Minus Greens, Neutral Densities and GamFusion.

CineFilter Correction colors and Diffusion are available in:

Sheets:	**24 in. x 20 in.**
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The CineFilter Swatchbook–Each Page Gives You All This Information:

- **Light Loss (*f* Stops)**
- **Mired Shift (±)**
- **Transmission %**
- **Quick Kelvin Conversion Chart**
- **Spectral Transmission**
- **Typical Applications**
- **Inside Front Cover is a White Reference Card**
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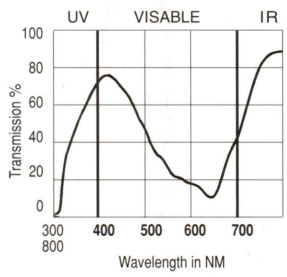

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1523

FULL CTB

Light loss = 1.7 Stops
24% Transmission
Mired Shift = –141

Convert 3200°K to 5500°K . Will convert 3200°K to photographic daylight. Can be used with other correction to achieve a specific color temperature. Use on lights and windows. If used with + or – green will help correct some fluorescent or discharge sources.

Converts ⟶	To
3200°K	5500°K
5600°K	34,480°K
2210°K	**3200°K**
3130°K	**5600°K**

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GamColor available / sheets: 20"x 24" / 3 roll sizes: 48"x 25', 24"x 50', (Junior) 24"x 198"

for more information and where to buy, call 888-GAM COLOR (US and Canada)

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